

Sequence Listing

<110> Ashkenazi, Avi J.
 Baker, Kevin P.
 Botstein, David
 Desnoyers, Luc
 Eaton, Dan L.
 Ferrara, Napoleone
 Fong, Sherman
 Gerber, Hanspeter
 Gerritsen, Mary E.
 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin

<120> Secreted and Transmembrane Polypeptides and Nucleic
 Acids Encoding the Same

<130> P2730P1C3

<150> 60/049787

<151> 1997-06-16

<150> 60/062250

<151> 1997-10-17

<150> 60/065186

<151> 1997-11-12

<150> 60/065311

<151> 1997-11-13

<150> 60/066770

<151> 1997-11-24

<150> 60/075945

<151> 1998-02-25

<150> 60/078910

<151> 1998-03-20

<150> 60/083322

<151> 1998-04-28

<150> 60/084600

<151> 1998-05-07

<150> 60/087106

<151> 1998-05-28

<150> 60/087607

<151> 1998-06-02
<150> 60/087609
<151> 1998-06-02

<150> 60/087759
<151> 1998-06-02

<150> 60/087827
<151> 1998-06-03

<150> 60/088021
<151> 1998-06-04

<150> 60/088025
<151> 1998-06-04

<150> 60/088026
<151> 1998-06-04

<150> 60/088028
<151> 1998-06-04

<150> 60/088029
<151> 1998-06-04

<150> 60/088030
<151> 1998-06-04

<150> 60/088033
<151> 1998-06-04

<150> 60/088326
<151> 1998-06-04

<150> 60/088167
<151> 1998-06-05

<150> 60/088202
<151> 1998-06-05

<150> 60/088212
<151> 1998-06-05

<150> 60/088217
<151> 1998-06-05

<150> 60/088655
<151> 1998-06-09

<150> 60/088734
<151> 1998-06-10

<150> 60/088738
<151> 1998-06-10

<150> 60/088742
<151> 1998-06-10

<150> 60/088810
<151> 1998-06-10

<150> 60/088824

<151> 1998-06-10
<150> 60/088826
<151> 1998-06-10

<150> 60/088858
<151> 1998-06-11

<150> 60/088861
<151> 1998-06-11

<150> 60/088876
<151> 1998-06-11

<150> 60/089105
<151> 1998-06-12

<150> 60/089440
<151> 1998-06-16

<150> 60/089512
<151> 1998-06-16

<150> 60/089514
<151> 1998-06-16

<150> 60/089532
<151> 1998-06-17

<150> 60/089538
<151> 1998-06-17

<150> 60/089598
<151> 1998-06-17

<150> 60/089599
<151> 1998-06-17

<150> 60/089600
<151> 1998-06-17

<150> 60/089653
<151> 1998-06-17

<150> 60/089801
<151> 1998-06-18

<150> 60/089907
<151> 1998-06-18

<150> 60/089908
<151> 1998-06-18

<150> 60/089947
<151> 1998-06-19

<150> 60/089948
<151> 1998-06-19

<150> 60/089952
<151> 1998-06-19

<150> 60/090246

<151> 1998-06-22
<150> 60/090252
<151> 1998-06-22

<150> 60/090254
<151> 1998-06-22

<150> 60/090349
<151> 1998-06-23

<150> 60/090355
<151> 1998-06-23

<150> 60/090429
<151> 1998-06-24

<150> 60/090431
<151> 1998-06-24

<150> 60/090435
<151> 1998-06-24

<150> 60/090444
<151> 1998-06-24

<150> 60/090445
<151> 1998-06-24

<150> 60/090472
<151> 1998-06-24

<150> 60/090535
<151> 1998-06-24

<150> 60/090540
<151> 1998-06-24

<150> 60/090542
<151> 1998-06-24

<150> 60/090557
<151> 1998-06-24

<150> 60/090676
<151> 1998-06-25

<150> 60/090678
<151> 1998-06-25

<150> 60/090690
<151> 1998-06-25

<150> 60/090694
<151> 1998-06-25

<150> 60/090695
<151> 1998-06-25

<150> 60/090696
<151> 1998-06-25

<150> 60/090862

<151> 1998-06-26
<150> 60/090863
<151> 1998-06-26

<150> 60/091360
<151> 1998-07-01

<150> 60/091478
<151> 1998-07-02

<150> 60/091544
<151> 1998-07-01

<150> 60/091519
<151> 1998-07-02

<150> 60/091626
<151> 1998-07-02

<150> 60/091633
<151> 1998-07-02

<150> 60/091978
<151> 1998-07-07

<150> 60/091982
<151> 1998-07-07

<150> 60/092182
<151> 1998-07-09

<150> 60/092472
<151> 1998-07-10

<150> 60/091628
<151> 1998-07-02

<150> 60/091646
<151> 1998-07-02

<150> 60/091673
<151> 1998-07-02

<150> 60/093339
<151> 1998-07-20

<150> 60/094651
<151> 1998-07-30

<150> 60/095282
<151> 1998-08-04

<150> 60/095285
<151> 1998-08-04

<150> 60/095302
<151> 1998-08-04

<150> 60/095318
<151> 1998-08-04

<150> 60/095321

<151> 1998-08-04

<150> 60/095301
<151> 1998-08-04

<150> 60/095325
<151> 1998-08-04

<150> 60/095916
<151> 1998-08-10

<150> 60/095929
<151> 1998-08-10

<150> 60/096012
<151> 1998-08-10

<150> 60/096143
<151> 1998-08-11

<150> 60/096146
<151> 1998-08-11

<150> 60/096329
<151> 1998-08-12

<150> 60/096757
<151> 1998-08-17

<150> 60/096766
<151> 1998-08-17

<150> 60/096768
<151> 1998-08-17

<150> 60/096773
<151> 1998-08-17

<150> 60/096791
<151> 1998-08-17

<150> 60/096867
<151> 1998-08-17

<150> 60/096891
<151> 1998-08-17

<150> 60/096894
<151> 1998-08-17

<150> 60/096895
<151> 1998-08-17

<150> 60/096897
<151> 1998-08-17

<150> 60/096949
<151> 1998-08-18

<150> 60/096950
<151> 1998-08-18

<150> 60/096959

<151> 1998-08-18
<150> 60/096960
<151> 1998-08-18

<150> 60/097022
<151> 1998-08-18

<150> 60/097141
<151> 1998-08-19

<150> 60/097218
<151> 1998-08-20

<150> 60/097661
<151> 1998-08-24

<150> 60/097952
<151> 1998-08-26

<150> 60/097954
<151> 1998-08-26

<150> 60/097955
<151> 1998-08-26

<150> 60/098014
<151> 1998-08-26

<150> 60/097971
<151> 1998-08-26

<150> 60/097974
<151> 1998-08-26

<150> 60/097978
<151> 1998-08-26

<150> 60/097986
<151> 1998-08-26

<150> 60/097979
<151> 1998-08-26

<150> 60/098525
<151> 1998-08-31

<150> 60/100634
<151> 1998-09-16

<150> 60/100858
<151> 1998-09-17

<150> 60/113296
<151> 1998-12-22

<150> 60/123957
<151> 1999-03-12

<150> 60/141037
<151> 1999-06-23

<150> 60/143048

<151> 1999-07-07
<150> 60/144758
<151> 1999-07-20

<150> 60/145698
<151> 1999-07-26

<150> 60/146222
<151> 1999-07-28

<150> 60/149396
<151> 1999-08-17

<150> 60/158663
<151> 1999-10-08

<150> 60/213637
<151> 2000-06-23

<150> 60/230978
<151> 2000-09-07

<150> 08/743698
<151> 1996-11-06

<150> 08/876698
<151> 1997-06-16

<150> 08/965056
<151> 1997-11-05

<150> 09/105413
<151> 1998-06-26

<150> 09/168978
<151> 1998-10-07

<150> 09/187368
<151> 1998-11-06

<150> 09/202054
<151> 1998-12-07

<150> 09/218517
<151> 1998-12-22

<150> 09/254311
<151> 1999-03-03

<150> 09/254460
<151> 1999-03-09

<150> 09/267213
<151> 1999-03-12

<150> 09/284291
<151> 1999-04-12

<150> 09/380137
<151> 1999-08-25

<150> 09/380138

<151> 1998-08-25
<150> 09/380139
<151> 1999-08-25

<150> 09/403296
<151> 1999-10-18

<150> 09/423844
<151> 1999-11-12

<150> 09/664610
<151> 2000-09-18

<150> 09/665350
<151> 2000-09-18

<150> 09/709238
<151> 2000-11-08

<150> 09/808689
<151> 2001-03-14

<150> 09/854816
<151> 2001-05-15

<150> 09/866028
<151> 2001-05-25

<150> 09/866034
<151> 2001-05-25

<150> 09/872035
<151> 2001-06-01

<150> 09/882636
<151> 2001-06-14

<150> 09/941,992
<151> 2001-08-28

<150> PCT/US97/20069
<151> 1997-11-05

<150> PCT/US98/19330
<151> 1998-09-16

<150> PCT/US98/19437
<151> 1998-09-17

<150> PCT/US98/21141
<151> 1998-10-07

<150> PCT/US98/25108
<151> 1998-12-01

<150> PCT/US99/00106
<151> 1999-01-05

<150> PCT/US99/05028
<151> 1999-03-08

<150> PCT/US99/12252

<151> 1999-06-02
<150> PCT/US99/21090
<151> 1999-09-15

<150> PCT/US99/21547
<151> 1999-09-15

<150> PCT/US99/28313
<151> 1999-11-30

<150> PCT/US99/28301
<151> 1999-12-01

<150> PCT/US99/28634
<151> 1999-12-01

<150> PCT/US99/30095
<151> 1999-12-16

<150> PCT/US99/30911
<151> 1999-12-20

<150> PCT/US00/00219
<151> 2000-01-05

<150> PCT/US00/00376
<151> 2000-01-06

<150> PCT/US00/03565
<151> 2000-02-11

<150> PCT/US00/04341
<151> 2000-02-18

<150> PCT/US00/04414
<151> 2000-02-22

<150> PCT/US00/04914
<151> 2000-02-24

<150> PCT/US00/05004
<151> 2000-02-24

<150> PCT/US00/05841
<151> 2000-03-02

<150> PCT/US00/06319
<151> 2000-03-10

<150> PCT/US00/06884
<151> 2000-03-15

<150> PCT/US00/07377
<151> 2000-03-20

<150> PCT/US00/08439
<151> 2000-03-30

<150> PCT/US00/13358
<151> 2000-05-15

<150> PCT/US00/13705

<151> 2000-05-17
 <150> PCT/US00/14042
 <151> 2000-05-22
 <150> PCT/US00/14941
 <151> 2000-05-30
 <150> PCT/US00/15264
 <151> 2000-06-02
 <150> PCT/US00/20710
 <151> 2000-07-28
 <150> PCT/US00/22031
 <151> 2000-08-11
 <150> PCT/US00/23522
 <151> 2000-08-23
 <150> PCT/US00/23328
 <151> 2000-08-24
 <150> PCT/US00/30952
 <151> 2000-11-08
 <150> PCT/US00/32678
 <151> 2000-12-01
 <150> PCT/US01/06520
 <151> 2001-02-28
 <150> PCT/US01/17800
 <151> 2001-06-01
 <150> PCT/US01/19692
 <151> 2001-06-20
 <150> PCT/US01/21066
 <151> 2001-06-29
 <150> PCT/US01/21735
 <151> 2001-07-09
 <160> 532
 <210> 1
 <211> 1943
 <212> DNA
 <213> Homo sapiens
 <400> 1
 cggacgcgtg ggtgcgaggc gaaggtgacc ggggaccgag catttcagat 50
 ctgctcggtg gacctggtgc accaccacca tgttggtctg aaggctgggtg 100
 tgtctccgga cactaccttc taggggttttc caccagctt tcaccaaggc 150
 ctccccctgt gtgaagaatt coactcagaa gaatcaatgg ctgttaacac 200
 cttagcagga atatgccacc aaaacaagaa ttgggatccg gcgtgggaga 250
 actggccaag aactcaaaga ggcagcattg gaaccatcga tggaaaaaat 300

attttaaatt gatcagatgg gaagatgggt tgttgctgga ggggctgctg 350
 ttggtcttgg agcattgtgc tactatggct tgggactgtc taatgagatt 400
 ggagctattg aaaagctgt aatttggcct cagtatgtca aggatagaat 450
 tcattccacc tatatgtact tagcagggag tattggttta acagctttgt 500
 ctgccatagc aatcagcaga acgcctgttc tcatgaact catgatgaga 550
 ggctcttggg tgacaattgg tgtgacctt gcagccatgg ttggagctgg 600
 aatgctggta cgatcaatac catatgacca gagccaggc ccaaagcatc 650
 ttgcttgggt gctacattct ggtgtgatgg gtgcagtggg ggctcctctg 700
 acaatattag ggggtcctct tctcatcaga gctgcatggg acacagctgg 750
 cattgtggga ggcctctcca ctgtggccat gtgtgogccc agtgaagaat 800
 ttctgaacat ggggtgcaccc ctgggagtg gctgggtct cgtctttgtg 850
 tctcattgg gatctatgtt tcttccacct accaccgtg ctggtgccac 900
 tctttactca gtggcaatgt acggtggatt agttcttttc agcatgttcc 950
 ttctgtatga taccagaaaa gtaatcaagc gtgcagaagt atcaccaatg 1000
 tatggagttc aaaaaatga tccattaac tcatgtctga gtatctacat 1050
 ggatacatca aatatattta tgcgagttgc aactatgtcg gcaactggag 1100
 gcaacagaaa gaaatgaagt gactcagctt ctggctcttc tgctacatca 1150
 aatatctgt ttaatggggc agatatgcat taaatagttt gtacaagcag 1200
 ctttcgttga agtttagaag ataagaaaca tgctatcata tttaaatgtt 1250
 ccggtaatgt gatgcctcag gtctgccttt ttttctggag aataaatgca 1300
 gtaatcctct cccaaataag cacacacatt tcaattctc atgtttgagt 1350
 gattttaaaa tgttttggtg aatgtgaaaa ctaaagtttg tgctatgaga 1400
 atgtgaagtct ttttctact ttaaaattha gtaggttcac tgagtaacta 1450
 aaatttagca aacctgtgtt tgcataatth tttggagtgc agaattattg 1500
 aattaatgac ataagtgtt tggagctttg gtaaaaggac cagagagaag 1550
 gagtacacct cagtcttttg tttttttaa tacttagaac ttagcacttg 1600
 tgttattgat tagtgaggag ccagtaagaa acatctgggt atttggaac 1650
 aagtgtcat tgttacattc atttgctgaa ctaacaaaa ctgttcatcc 1700
 tgaaacaggc acaggtgatg cattctcctg ctgttgcttc tcagtgtctc 1750
 ctttccaata tagatgtggg catgtttgac ttgtacagaa tgttaatcat 1800
 acagagaatc cttgatggaa ttatatatgt gtgttttact ttggaatgtt 1850
 acaaaaggaa ataactttaa aactattctc aagagaaaa attcaaaaga 1900

tgaaatatgt tgctttttcc agaatacaaa cagtatactc atg 1943

<210> 2

<211> 345

<212> PRT

<213> Homo sapiens

<400> 2

Met	Leu	Ala	Ala	Arg	Leu	Val	Cys	Leu	Arg	Thr	Leu	Pro	Ser	Arg	
1				5					10					15	
Val	Phe	His	Pro	Ala	Phe	Thr	Lys	Ala	Ser	Pro	Val	Val	Lys	Asn	
				20					25					30	
Ser	Ile	Thr	Lys	Asn	Gln	Trp	Leu	Leu	Thr	Pro	Ser	Arg	Glu	Tyr	
				35					40					45	
Ala	Thr	Lys	Thr	Arg	Ile	Gly	Ile	Arg	Arg	Gly	Arg	Thr	Gly	Gln	
				50					55					60	
Glu	Leu	Lys	Glu	Ala	Ala	Leu	Glu	Pro	Ser	Met	Glu	Lys	Ile	Phe	
				65					70					75	
Lys	Ile	Asp	Gln	Met	Gly	Arg	Trp	Phe	Val	Ala	Gly	Gly	Ala	Ala	
				80					85					90	
Val	Gly	Leu	Gly	Ala	Leu	Cys	Tyr	Tyr	Gly	Leu	Gly	Leu	Ser	Asn	
				95					100					105	
Glu	Ile	Gly	Ala	Ile	Glu	Lys	Ala	Val	Ile	Trp	Pro	Gln	Tyr	Val	
				110					115					120	
Lys	Asp	Arg	Ile	His	Ser	Thr	Tyr	Met	Tyr	Leu	Ala	Gly	Ser	Ile	
				125					130					135	
Gly	Leu	Thr	Ala	Leu	Ser	Ala	Ile	Ala	Ile	Ser	Arg	Thr	Pro	Val	
				140					145					150	
Leu	Met	Asn	Phe	Met	Met	Arg	Gly	Ser	Trp	Val	Thr	Ile	Gly	Val	
				155					160					165	
Thr	Phe	Ala	Ala	Met	Val	Gly	Ala	Gly	Met	Leu	Val	Arg	Ser	Ile	
				170					175					180	
Pro	Tyr	Asp	Gln	Ser	Pro	Gly	Pro	Lys	His	Leu	Ala	Trp	Leu	Leu	
				185					190					195	
His	Ser	Gly	Val	Met	Gly	Ala	Val	Val	Ala	Pro	Leu	Thr	Ile	Leu	
				200					205					210	
Gly	Gly	Pro	Leu	Leu	Ile	Arg	Ala	Ala	Trp	Tyr	Thr	Ala	Gly	Ile	
				215					220					225	
Val	Gly	Gly	Leu	Ser	Thr	Val	Ala	Met	Cys	Ala	Pro	Ser	Glu	Lys	
				230					235					240	
Phe	Leu	Asn	Met	Gly	Ala	Pro	Leu	Gly	Val	Gly	Leu	Gly	Leu	Val	
				245					250					255	
Phe	Val	Ser	Ser	Leu	Gly	Ser	Met	Phe	Leu	Pro	Pro	Thr	Thr	Val	
				260					265					270	
Ala	Gly	Ala	Thr	Leu	Tyr	Ser	Val	Ala	Met	Tyr	Gly	Gly	Leu	Val	

275	280	285
Leu Phe Ser Met Phe Leu Leu Tyr Asp Thr Gln Lys Val Ile Lys		
290	295	300
Arg Ala Glu Val Ser Pro Met Tyr Gly Val Gln Lys Tyr Asp Pro		
305	310	315
Ile Asn Ser Met Leu Ser Ile Tyr Met Asp Thr Leu Asn Ile Phe		
320	325	330
Met Arg Val Ala Thr Met Leu Ala Thr Gly Asn Arg Lys Lys		
335	340	345

<210> 3
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 3
 tgtaaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 4
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 4
 caggaacacag ctatgaccac ctgcacacct gcaaatccat t 41

<210> 5
 <211> 3033
 <212> DNA
 <213> Homo sapiens

<400> 5
 gaaggctgcc togetggtcc gaattcgggtg gcgccacgtc cgcccgcttc 50
 cgccctctgc atcgcggtt cggcggttc caccatagaca cctaacagtc 100
 gcggagccgg ccgcgtcgtg agggggtcgg caccggggagt cggcggtct 150
 tgtcatctt ggctacctgt gggtcgaaga tgctggacat cggagactgg 200
 ttcaggagca tcccgcgat caccgcgtat tggttcgccg ccaccgtgcg 250
 cgtgcccttg gtgcgcaaac tcggcctcat cagcccgccg tacctcttcc 300
 tctggcccca agccttcctt tatcgcttcc agatttggag gccaatcact 350
 gccacatttt atttccctgt gggtcacgga actggatttc tttatttggt 400
 caatttatat ttcttatatc agtattctac gcgacttgaa acaggagctt 450
 ttgatgggag gccagcagac tattttattca tgctcctctt taactggatt 500
 tgcacgtgta ttactggctt agcaatggat atgcagttgc tgatgattcc 550

tctgatcatg tcagtacttt atgtctgggc ccagctgaac agagacatga 600
ttgtatcatt ttggtttgga acacgattta aggcctgcta ttacccttg 650
gttatccttg gattcaacta tatcatogga ggctcggtaa tcaatgagct 700
tattggaaat ctggttggaac atctttattt ttctctaagt ttcagatacc 750
caatggactt gggaggaaga aattttctat ccacacctca gttttgtac 800
cgctggctgc ccagtaggag aggaggagta tcaggatttg gtgtgcccc 850
tgctagcatg aggcgagctg ctgatcagaa tggcggaggg gggagacaca 900
actggggcca gggctttcga cttaggagacc agtgaagggg cggcctcggg 950
cagccgctcc tctcaagcca catttctccc cagtgtctgg tgcacttaac 1000
aactgcgttc tggctaacac tgttggacct gacccacact gaatgtatgc 1050
tttcagtacg agacaaagtt tcttaaatcc cgaagaaaaa tataagtgtt 1100
ccacaagttt cactgatttc attcaagtcc ttactgctgt gaagaacaaa 1150
taccgaactgt gcaaattgca aaactgacta catttttttg tgtctctct 1200
tctccccctt cgtctgaat aatgggtttt agcgggtcct aatctgctgg 1250
cattgagctg gggctgggtc accaaaacct tcccaaaagg accttatctc 1300
tttcttgac acatgcctct ctcccacttt toccaacccc cacatttgca 1350
actagaaaaa gttgccata aaattgctct gcccttgaca ggttctgtta 1400
tttattgact ttggccaag ctggtcacaa caatcatatt cagttattt 1450
tcccccttg gtggcagaac tgttaccat agggggagaa gacagccacg 1500
gatgaagcgt ttctcagctt ttggaattgc ttgactgac atcgttgtt 1550
aaccgtttgc cactcttcag atatttttta taaaaaagt accactgagt 1600
tcattgaggg cacagatttg ttattaatga gatacgaggg ttggtgctgg 1650
gtgtttgttt cctgagctaa gtgatcaaga ctgtagtgga gttgcagcta 1700
acatgggtta ggtttaaacc atgggggatg cacccttttg cgtttcatat 1750
gtagccctac tggctttgtg tagctggagt agttgggttg ctttgtgtta 1800
ggaggatcca gatcatgttg gctacagga gatgctctct ttgagaggtc 1850
ctgggcattg attccattt caatctcatt ctggatatgt gttcattgag 1900
taaaggagga gagaccctca tacgctattt aaatgtcact tttttgcta 1950
tcccccggtt ttgtgtcatg tttaaatga ttgtaggaa ggcgcagctc 2000
ctctctgac gtagatcatt ttttaaagct aatgtaaga catctaagg 2050
aataacatga tttaaggttg aaatggcttt agaatactt gggtttgagg 2100
gtgtgttatt ttgagtcag aatgtacaag ctctgtgaat cagaccagct 2150

taaataccca cacctttttt tcgtagggtg gcttttcccta tcagagcttg 2200
 gtcataaacc aaataaagtt ttttgaaggc catggctttt cacacagtta 2250
 ttttatttta tgacgttatc tgaagcaga ctgtaggag cagtattgag 2300
 tggctgtcac actttgaggc aactaaaaag gcttcaaagc ttttgatcag 2350
 tttcttttca ggaacattg tgctctaaca gtatgactat tctttccccc 2400
 actottaac agtgtgatgt gtgttatcct aggaatag agttggcaaa 2450
 caactttotca ttttgaatag agtttgtgtg tacttctcca tatttaattt 2500
 atatgataaa ataggtgggg agagtctgaa ccttaactgt catgttttgt 2550
 tgttcactcg tggccacaat aaagtttact tgtaaaattt tagaggccat 2600
 tactccaatt atgttgccag tacactcatt gtacaggcgt ggagactcat 2650
 tgtatgtata agaattttc tgacagttag tgacccggag tctctggtgt 2700
 accctcttac cagtcagctg cctgcgagca gtcatttttt cctaaaggtt 2750
 tacaagtatt tagaactttt cagttcaggg caaaatgttc atgaagtatt 2800
 tctcttataa catgggttagg aagctgatga cggtattgat ttgtctgga 2850
 ttatgtttct ggaataattt taccaaaaca agctatttga gttttgactt 2900
 gacaaggcaa aacatgacag tggattctct ttacaaatgg aaaaaaaaaa 2950
 tcttattttt gtataaagga ctccctttt tgtaaactaa tcctttttat 3000
 tggtaaaaat tgtaaatata aatgtgcaac ttg 3033

<210> 6
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Ser Asp Ile Gly Asp Trp Phe Arg Ser Ile Pro Ala Ile Thr
 1 5 10 15
 Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys
 20 25 30
 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala
 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110					115					120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125					130					135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140					145					150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
				155					160					165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170					175					180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185					190					195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215					220					225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
				230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln				
				245					250					

<210> 7
 <211> 1373
 <212> DNA
 <213> Homo sapiens

<400> 7
 ggggccgcgg ctatagggcgg ctacgtgtgt tgccatagcg accattttgc 50
 attaactcgtt tggtagcttc tatcctgggg gctgagcgac tgcgggccag 100
 ctcttccctc actccctctc ggctccttgt ggcocaaagg cctaaccggg 150
 gtccggcggt ctggcctagg gatcttcccc gttgccccct tggggcgsga 200
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
 ggggttcctgc gagggccaga ctgggtccatc cccatcttgg accttgtgga 300
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350
 gccacagacc ggtgattttg gtggcctgtg ttccccttgt ttttgatgat 400
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaaga 450
 actagtgtgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500
 aagatcaatt tcaagaagca tgcaattctc ctcttgcaaa gaccatata 550
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600
 taaagcaatg atggttcaga aaaacattga aatgcagctg caagccattc 650
 gaataattca agagagaaat ggtgtattac ctgactgctt aaccgatggc 700

tctgatgtg tcaagtacct tgaacacgaa gagatgaaaa tcttgaggga 750
 agttctctaga aaatcaaaaag aggaatatga ccagggaagaa gaaaggaaga 800
 ggaaaaaaca gttatcagag gctaaaacag aagagccac agtgcatcc 850
 agtgaagctg caataatgaa taattcccaa ggggatgtg aacattttgc 900
 acacccacc tcaagaagta aaatgcattt tgctaatacag tcaatagaac 950
 ctttgggaag aaaagtggaa aggtctgaaa cttcctccct cccacaaaaa 1000
 ggctgaaga ttctggcct agagcatgcy agcattgaag gaccaatagc 1050
 aaacttatca gtacttgaa cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaaccactg gggaggtaga 1200
 ggaaatgaca gagaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaat gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Ala Ala Glu Glu Asp Glu Val Glu Trp Val Val Glu Ser
 1 5 10 15
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	
				155					160					165	
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	
				170					175					180	
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
				185					190					195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	
				200					205					210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	
				215					220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
				230					235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
				245					250					255	
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	
				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
				275					280					285	
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	
				290					295					300	
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	
				305					310					315	
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	
				320					325					330	
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	
				335					340					345	
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	
				350					355					360	
Lys	Glu	Glu	Val	Ile	Asn	Lys									
				365											

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 9
 gggcacagca catgtgaagt ttttgatgat gaagaagaaa gcaaattgac 50
 ctatacagag attcatcagg aatacaaaaga actagttgaa aagctgttag 100
 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcacttctc ctottgcaaa gacccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
 ttgaacacga agagatgaaa atcctgaggg aagttottag aaaatcaaaa 400
 gaggaatatg accaggaa 418

<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 ttgacctata cagagattca tc 22

<210> 11
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ctaagaactt cctcaggat ttt 23

<210> 12
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 12
 atgaagatca atttcaagaa gcatgcactt ctctctttgc 40

<210> 13
 <211> 2886
 <212> DNA
 <213> Homo sapiens

<400> 13
 gcgtgggttt tgtttctcaa taggcggctt agaggagggg gctttttcgc 50
 ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 100
 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttcttc 150
 cactagaage tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 200
 acagtgtctg agtcatcctg taatatgctc cttgtcaaca atgtatacat 250
 tctctetagg tgccatattc attgctttta gctcaagtcg catottacta 300
 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
 tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgctgtgtg 400
 cttctgtgtg tataaagaaa gatcatcaaa gtgagaaattt gaaatatgct 450

tctctggaag aattctctga ttctcatgaag tggctccattc ctgcctttct 500
 ttatttctctg gataacttga ttgtcttcta tgtcctgtcc tatcttcaac 550
 cagccatggc tggttatcttc tcaaatTTTA gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggaactaaaa 700
 ctttacagca caacttgga ggacgtggat ttcatcacga tgcctttttc 750
 agcccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850
 cagccagagt ttccagtcac atcgtctctg gcactgggcca tgtttctatt 900
 atagtccagt gttttatttc ttcaatggct aatatctata atgaaaagat 950
 actgaaggag gggaaccagc tcaactgaaag catcttcata cagaacagca 1000
 aactctattt ctttggcatt ctgtttaatg ggctgactct ggcccttcag 1050
 aggagtaacc gtgatcagat taagaactgt ggattttttt atggccacag 1100
 tgcattttca gtgccccta tttttgtaac tgcattccag ggcccttcag 1150
 tggctttcat tctgaagttc ctggataaca tgttccatgt cttgatggcc 1200
 cagggtacca ctgtcattat cacaacagtg tctgtccttg tctttgactt 1250
 caggccctcc ctggaatttt tcttggaagc cccatcagtc cttctctcta 1300
 tattttatta taatgccagc aagcctcaag ttcoggaaata cgcacctagg 1350
 caagaaaaga tccgagatct aagtggcaat ctttgggagc gttccagtgg 1400
 ggatggagaa gaactagaaa gacttaccaa acccaagagt gatgagtcag 1450
 atgaagatac tttctaactg gtaccacat agtttgcagc tctcttgaa 1500
 cttattttca cattttcagt gtttgaata tttatctttt cactttgata 1550
 aaccagaaat gtttctaact cctaattatc tttgcatata tctagctact 1600
 ccctaataatg ttccatcaa ggcttagagt acccaaggc taagaaattc 1650
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700
 tacttgataa atcagaaaagt tatatgtgca gattattttt cttggccttc 1750
 aagcttccaa aaaacttgta ataactcatgt tagctatago ttgtatatac 1800
 acatagagat caatttgcca aatattcaca atcatgtagt tctagtttac 1850
 atgcoaaagt cttccctttt taacattata aaagctaggt tgtctcttga 1900
 attttgaggc cctagagata gtcattttgc aagtaaagag caacgggacc 1950
 ctttctaaaa acgttggttg aaggacctaa atacctggcc ataccataga 2000
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

cagacacaac atctcagaat ttttaattttt agaaattcat gggaaattgg 2100
 atttttgtaa taatcttttg atgtttttaa cattgggtcc ctagtcca 2150
 tagttaccac ttgtatttta agtcatttaa acaagccacg gtggggcttt 2200
 ttctctctca gtttgaggag aaaaatcttg atgtcattac tctgaatta 2250
 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300
 agctgtgact attgtatato tttccaagag ttgaaatgct ggcttcagaa 2350
 tcataccaga ttgtcagtga agctgatgcc taggaacttt taaagggatc 2400
 ctttcaaaag gatcacttag caaacacatg ttgactttta actgatgtat 2450
 gaattattaat actctaaaaa tagaaagacc agtaatatat aagtcacttt 2500
 acagtgtctac ttcacactta aaagtgcagtg gtatttttca tggtaatttg 2550
 catgcagcca gttaactctc gtagatagag aagtcagggtg atagatgata 2600
 ttaaaaatta gcaaacaaaa gtgacttgct cagggtcagtg cagctgggtg 2650
 atgatagaag agtgggcttt aactggcagg cctgtatgtt tacagactac 2700
 catactgtaa atatgagctt tatgggtgca ttctcagaaa cttatacatt 2750
 tctgtctctc ttctctctaa gtttcatgca gatgaatata agtgaatata 2800
 ctattatata attcatttgt gatattccaca ataatatgac tggcaagaat 2850
 tggtggaat ttgtaattaa aataattatt aaacct 2886

<210> 14
 <211> 424
 <212> FRT
 <213> Homo sapiens

<400> 14
 Met Glu Lys Gln Cys Cys Ser His Pro Val Ile Cys Ser Leu Ser
 1 5 10
 Thr Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser
 20 25 30
 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn
 35 40 45
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu
 50 55 60
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys
 65 70 75
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu
 80 85 90
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe
 95 100 105
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro
 110 115 120

Ala Met Ala Val	Ile Phe Ser Asn Phe	Ser Ile Ile Thr Thr	Ala
125		130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg	Arg Leu Asn Trp Ile	Gln
140		145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu	Ser Ile Val Ala Leu	Thr
155		160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn	Leu Ala Gly Arg Gly	Phe
170		175	180
His His Asp Ala	Phe Phe Ser Pro Ser	Asn Ser Cys Leu Leu	Phe
185		190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn	Cys Thr Ala Lys Glu	Trp
200		205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr	Thr Ala Arg Val Phe	Ser
215		220	225
His Ile Arg Leu	Gly Met Gly His Val	Leu Ile Ile Val Gln	Cys
230		235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr	Asn Glu Lys Ile Leu	Lys
245		250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile	Phe Ile Gln Asn Ser	Lys
260		265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn	Gly Leu Thr Leu Gly	Leu
275		280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys	Asn Cys Gly Phe Phe	Tyr
290		295	300
Gly His Ser Ala	Phe Ser Val Ala Leu	Ile Phe Val Thr Ala	Phe
305		310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu	Lys Phe Leu Asp Asn	Met
320		325	330
Phe His Val Leu	Met Ala Gln Val Thr	Thr Val Ile Ile Thr	Thr
335		340	345
Val Ser Val Leu	Val Phe Asp Phe Arg	Pro Ser Leu Glu Phe	Phe
350		355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser	Ile Phe Ile Tyr Asn	Ala
365		370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala	Pro Arg Gln Glu Arg	Ile
380		385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu	Arg Ser Ser Gly Asp	Gly
395		400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro	Lys Ser Asp Glu Ser	Asp
410		415	420
Glu Asp Thr Phe			

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

<400> 15
cgtgcctgcg caatgggtgt cgggtccgct ttttccaat cgggacgtaa 50
tcgtgggttt tgttctgcaa taggcggctt agaggagggt gctttttcgc 100
ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgtctc 150
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250
acagtgtctg agtcatcctg taatatgctc cttgtcaaca atgtatacat 300
tctgtctagg tgcataatc attgctttaa gctcaagtcg catcttacta 350
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 450
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
tcttggaagg aattctctga ttctcatgaag tggtcattc ctgcttttct 550
ttatttctcg gataacttga ttgtcttcta tgtctgtct tatcttcaac 600
cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
ctattcagga tagtgtgaa gagggctcta aactggatcc agtgggcttc 700
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
ctatacctac tgtagcttct 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttcagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcacacctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggaacgcgtg ggccggacgcg tggggcggaag cgtggggccg gcttggttag 50
cgccggcgcg cctgtgctaa ggctgctacg aagcgagctt gggaggagca 100
gcccgcctgcg gggcagagga gcatcccgtc taccaggctc caagcggcgt 150
ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200
ggggctgcta cccaccagca tctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agccccctac cagggtgacg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400
tctctgcctc catcatcctg tttgtgggccc gagcctggga tgccatcaca 450
gacccccctg tgggcctctg catcagaaaa tccccctgga cctgacctgg 500
tcgccttatg ccttgatca tcttctccac gcccttgccc gtcattgcct 550
acttctcat ctggttctg cccgaacttc cacacggcca gacctattgg 600
tacctgcttt tctattgcct ctttgaaca atggtcacgt gttccatgt 650
tcctactcgt gctctacca tgttcacag caaccgagca gactgacgg 700
gattctgcca ccgcctatcg gatgactgtg gaagtgtcgg gcacagtgt 750
gggcacggcg atccaggggc aaatcgtggg ccaagcagac acgccttggt 800
tccaggactt caatagctct acagtagctt cacaagtgc caaccataca 850
catggcacca cttcacacag ggaaacgcaa aaggcatacc tgcctggcgc 900
gggggtcatt gtctgtatct atataatctg tgctgtcacc ctgatcctgg 950
gcgtgcggga gcagagagaa ccctatgaag cccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggctcatg agccacggcc catcacatca 1050
acttattact ggcttctct tccctcctt ggcttctcat cgtgtggagg 1100
ggaactttgt cttgttttgc acctacacct tgggcttccg caatgaattc 1150
cagaatctac tctgggcat catgctctcg gccactttaa ccatcccat 1200
ctggcagtggt ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu
				110					115					120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln
				125					130					135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala
				140					145					150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu
				155					160					165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile
				170					175					180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln
				185					190					195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe
				200					205					210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu
				215					220					225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu
				230					235					240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn
				245					250					255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu
				260					265					270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys
				275					280					285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile
				290					295					300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val
				305					310					315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro
				320					325					330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln
				335					340					345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val
				350					355					360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr
				365					370					375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln
				380					385					390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala
				395					400					405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr
				410					415					420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
455

<210> 21
<211> 571
<212> DNA
<213> Homo sapiens

<400> 21
gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50
tatataatct gtgctgtcat cctgatcctg ggcgtgctgg agcagagaga 100
accctatgaa gccccagcagt ctgagccaat cgctacttc cggggcctac 150
ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200
ttcacctcct tggctttcat gctgggtggag gggaactttg tcttgttttg 250
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctccctggcca 300
tcatgtcttc ggccacttta accattocca tctggcagtg gttcttgacc 350
cggtttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
attttotcat ttggtggccc tcatggagag taacctcacc attacatatg 450
cggtagctgt ggcagctggc atcagtggtg cagctgcctt ctactaccc 500
tgggccatgc tgctgatgt cattgacgac ttccatctga agcagcccca 550
cttccatgga accgagccca t 571

<210> 22
<211> 1173
<212> DNA
<213> Homo sapiens

<400> 22
ggggcttcgg cggcagcggc cagcctagtg cggctctggt aggatttaca 50
aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagtgtga 100
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
cattactgca gtaacactcc accatataga cccggcttta cttatatca 250
gtgacactgg tacagtagct ccagaaaaat gcttattttg ggcaatgcta 300
aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaagg 400
ctggccttgt acttggaata ctgagttggt taggactttc tattgtggca 450

aacttcaga aaacaaccct tttgtctga catgtaagt gagctgtgct 500
taccttttgt atgggctcat tatatatgtt tgttcagacc atcctttcct 550
accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctggtgtgg agtaagtgca cttagcatgc tgacttgctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
gcgaatggt ctatgtcatt ttccttcttt ggttttttcc tgacttacat 800
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
taacctctta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
ctactttcca gagatatattg atgaaaggat aaaatatctt tgtaatgatt 950
atgattctca gggattgggg aaaggttcac agaagtgtgt tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctataact ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu
1 5 10 15
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
20 25 30
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp
155 160 165

Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Gln Lys Leu His Trp
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala
200 205 210

Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr
215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
230 235 240

Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn
245 250 255

Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile
260 265

<210> 24
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 14, 484
<223> unknown base

<400> 24
cggaagcgttg ggcngcgcca gcggccagcg ctagtcggtc tggttaagtc 50
ctgatgccga gttccgtctc tcgggtcttt tctgtgtccc aggcgaagcg 100
gagcggagat cctcaaacgg cctagtgttt cgcgcttccg gagaaatca 150
gcggtctaata taattcctct ggtttgttga agcagttacc aagaatttc 200
aaccctttcc cacaaaagct aattgagtac acgttcctgt tgagtacacg 250
ttcctgttga ttacaaaag gtgcagggtat gagcagggtt gaagactaac 300
attttgtgaa gttgtaaaac agaaaacctg ttagaatatgt ggtgtgttca 350
gcaaggccctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccg 450
gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtg tttcagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgccgc tgcgtcccg agtgcgaagt agcttctcgg 50
ctgccccgcg ggccgggggtg cggagccgac atgcgcccgc ttctcggcct 100
ccttctggtc ttgcgcggct gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgccccg cgggcggaga ctgggctcca ccgaggaggc tgagggcagg 200
tcgctgtggt tccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctaogtgctc ctgctcttct 300
gcggcgccta cctctacaaa cagggtcttg ccatccccgc ctccagcttc 350
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggetttctgct 400
gtgctgtgtg ttgacctcg tgggtgccac atgctgtac ctgctctcca 450
gtatttttgg caaacagttg gtggtgtcct actttcctga taaagtggcc 500
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt ttttttctt 550
attgttttgg agacttttcc ccatgacacc aaactgggtc ttgaaactct 600
cggccccaat totgaacatt cccatcgtgc agtttcttct ctcagttctt 650
atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccatcct 700
gtcaacccta acctctctgg atgctctttt ctctctggag actgtcttta 750
agctgttggc cattgccatg gtggcattaa ttcttggaa cctcattaaa 800
aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaata 850
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900
ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagccct 950
cattgttttt gattgccttc tatagtgat gtggacactg tgcatcaatg 1000

tgcagtgctc ttccagaaag gacactctgc tcttgaaggt gtattacatc 1050
 aggtttttcaa accagccctg gtgtagcaga cactgcaaca gatgocctcct 1100
 agaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatcccag 1150
 cactttggga ggcgcaggcc ggtgattcac aaggtcagga gttcaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaaa acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcaggagaat tgcttgaacc aaggtggcag aggttgagcgt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28
 <211> 264
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr
 1 5 10 15
 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg
 20 25 30
 Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro
 35 40 45
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu
 50 55 60
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly
 65 70 75
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe
 80 85 90
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu
 95 100 105
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr
 110 115 120
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe
 125 130 135
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg
 140 145 150
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met
 155 160 165
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile
 170 175 180
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro
 185 190 195
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu
 200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu
 215 220
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys
 230 235 240
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala
 245 250 255
 Asn His Ile His Ser Arg Lys Asp Thr
 260

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
 ccgaggcgagg agggagcccgagg gggggcgcgga gccccgcgatg aatcattgta 50
 gtcaatcatt ttccagttct cagcgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctccagagacc cccccgcgag tatcctctcc ttatagtgtg gtataaggtt 350
 ctgcgaacct tgggattaat ctgtctcact gcctactttg tgattcaacc 400
 tttcagocca ttacacactg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggtgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctggtggac aaacgactgt gacgagaatg 600
 agtcagagcc cattcctgcc aactgcactg gctgtgcccc gaacacactg 650
 aagggtgatgc tcctggaaga cgcaccaagg aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agccccgtgt ggagggaagc attcagcatt 750
 ttttgtgcca gtaccctgag gcgacagaag gcttctctga aggggttttc 800
 gccaaagtgt ggcgctgctt tcctgagcgg tggttcccat ttccctatcc 850
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctcg 900
 ttttcaacta cctgocattt ccaaaagatg cctctttaaa caagtgtctc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgcgg aagacattgt cagtctgtgg ccattgccaat agagccaggg 1100
 gatatcggtc atgtcgacac caccactggg aaggtctacg ttatagccag 1150

aggggtccag cctttggtca tctgcgatgg aaccgctttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser 15
 1 5 10
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met 30
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys 45
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val 60
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala 75
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val 90
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg 105
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys 120
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp 135
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu 150
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys 165
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His 180
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile 195
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser 210
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp 225
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln 240
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro 255
 245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265 270
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345
 Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
 ccacggtgtc cgttcttcgc ccggcggcag ctgtcccca ggcgaggaga 50
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtaaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cactgtgttt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattgaa gacatggatc 200
 ttgctgcca cagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcaagtgtgc atgtcagaga aggcaattga 300
 aaaatttacc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aactttggga 400
 ttaattctgc tcaactgcta ctttgtgatt caacctttca gccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc cccccacgcg tccggctgaa cacctcttct ttggagtcag 50
 ccactgatga ggcaggggtc ccacttgacg ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgcagacgcg 150
 tgccatgag cgcgtggggc tgcagtgagg actgccctcc ctgccaccca 200
 ccaatggcag cccacacctc tttaagagct tccaggcttt ttgtgccaca 250

cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300
 gttcgaaatg gacacgtatg ctaagagcca cgacettatg tcaggtttct 350
 ggaatgcctg ctatgacatg cttatgagca gtgggcacg cgccagtg 400
 gagcgcgccc agagtcgtcg ggcctccag gagctgtgc tggaaacctgc 450
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500
 agcaggcaac gcagcactcc atggccctgc tgcaactggg gcgcgtgtgg 550
 cgccagctcg ccagcccatg tggggcctgg gcgctgagg acactcccat 600
 ccccgcctgg aaactgtcca gcgcgagac atattcacgc atgcgtctga 650
 agctggtgcc caaccatcac ttccaccctc acctggaagc cagcgctctc 700
 cgagacaatc tgggtgaggt tcccctgaca ccacccagg aggcctcact 750
 gcctctggca gtgaccaaag agggccaaagt gagcacccca ccagagtgc 800
 tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagacccc 850
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcggc 900
 cgagtgccag ctggtgacgg tagtggcctg ggtccaggg ctgctggagg 950
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtggaa 1000
 accgaggagg gcacoggcta tgatttcgg cgccactgg ccagctcgc 1050
 tgaggtccac ctgcggcgtt tcaacctgcg ccgttcagca cttgagctct 1100
 tctttatcga tcaggccaac tacttctca acttcccatg caagtgggc 1150
 acgacccagc tctcatctcc tagccagact ccgagacccc agcctggccc 1200
 catccccccc cataccaggc tacggaaacca ggtgtactcg tggctcctgc 1250
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccaaggag 1300
 atgctgcgtg cctcaggcct taccagaaa tgggtacagc gtgagatata 1350
 caactctcag tacttgatgc aactcaacac cattgcgggg cggacctaca 1400
 atgacctgtc tcagtacct gtgttccctc ggtcctgca ggactacgtg 1450
 tccccacccc tggacctcag caaccagcc gtcttcggg acctgtctaa 1500
 gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
 atgaaagctt tgaggacca gcagggacca ttgacaagtt ccaatatggc 1600
 acccaactact ccaatgcagc aggcgtgatg cactacctca tccgcgtgga 1650
 gcccttcacc tccctgcaog tccagctgca aagtggccgc tttgactgct 1700
 ccgaccggca gttccactcg gtggcggcag cctggcaggc acgcctggag 1750
 agccctgcgg atgtgaagga gctcatcccg gaattcttct acttctctga 1800
 ctctctggag aaccagaaog gttttgacct gggctgtctc cagctgacca 1850

acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900
 gacttcattcc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950
 acacctacac gaggatgatc acctcatctt tggctacaag cagcgggggc 2000
 cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
 gctgtagacc tggaccatgt gacagatgag cgggaacgga aggtctctga 2100
 gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
 cacatccaac tcggctctca gctgaggaag cagcccatcg ccttgcaacg 2200
 ctggacacta actcacctag catcttcacg cacctggagc aactcaaggc 2250
 attcttcgca gagtgactg tgagtgccag tgggtgctg ggcaccacaca 2300
 gctgggttgc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
 gacccacca tgggcagcca caagacgag cagctgtga gtggcccggt 2400
 ggtgccagcg agtgggtgta gtggacaagc actggcagtg gccccgggatg 2450
 gaaagotgct attcagcggg gccactggg atggcagcct gcgggtgact 2500
 gcactacccc gtggcaagct gttgagccag ctacagctgc acctgtatgt 2550
 agtaacctgc cttgactcgg acacctgtgg catctacctc atctcaggct 2600
 ccggggacac cagtgcatg gtgtggcggc tcctgcatca ggggtgctg 2650
 tcagtaggcc tggcaccaaa gcctgtgcag gtctgtatg ggcattggggc 2700
 tgcaagtgagc tgtgtggcca tcagcactga acttgacatg gctgtgtctg 2750
 gatctgagga tggaaactgt atcatacaca ctgtacgcg cggacagttt 2800
 gtagcggcac tacggcctct gggtgccaca ttccctggac ctattttcca 2850
 cctggcattg gggtccgaag gccagattgt ggtacagagc tcagcgtggg 2900
 aacgtcctgg ggccaggtc acctactcct tgcacctgta ttcagtcaat 2950
 gggaagtgc gggttctact gccctggca gagcagccta cagccctgac 3000
 ggtgacagag gacttttgtt tgctgggcac cgcccatgac gccctgcaca 3050
 tcctccaact aaacacactg ctcccgccg cgccctccct gcccatgaag 3100
 gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150
 gggcctggag gatggcaagc tcatcgtggt ggtgcggggc cagccctctg 3200
 aggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctgcgcggcg 3250
 atotcccagg tgtctcggg agagacggaa tacaacccta ctgagggcgcg 3300
 ctgaacctgg ccagtcgggc tgctcggggc ccgccccggc caggcctggc 3350
 ccggggagcc ccgccagaa gtgcggcgga acaccccggt gtgggcagcc 3400
 caggggggtga gcggggccca ccctgccag ctcagggatt gcggggcgat 3450

gttaccacct cagggattgg cgggoggaag tcccggccct cgccggctga 3500
 gggggccccc tgagggccag cactggcgtc t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu 15
 1 5 10
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser 30
 20 25
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe 45
 35 40
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu 60
 50 55
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His 75
 65 70
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala 90
 80 85
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg 105
 95 100
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys 120
 110 115
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala 135
 125 130
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu 150
 140 145
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr 165
 155 160
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu 180
 170 175
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln 195
 185 190
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val 210
 200 205
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val 225
 215 220
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly 240
 230 235
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val 255
 245 250
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe 270
 260 265

Phe Ile Asp Gln	Ala Asn Tyr Phe Leu	Asn Phe Pro Cys Lys	Val
275		280	285
Gly Thr Thr Pro	Val Ser Ser Pro Ser	Gln Thr Pro Arg Pro	Gln
290		295	300
Pro Gly Pro Ile	Pro Pro His Thr Gln	Val Arg Asn Gln Val	Tyr
305		310	315
Ser Trp Leu Leu	Arg Leu Arg Pro Pro	Ser Gln Gly Tyr Leu	Ser
320		325	330
Ser Arg Ser Pro	Gln Glu Met Leu Arg	Ala Ser Gly Leu Thr	Gln
335		340	345
Lys Trp Val Gln	Arg Glu Ile Ser Asn	Phe Glu Tyr Leu Met	Gln
350		355	360
Leu Asn Thr Ile	Ala Gly Arg Thr Tyr	Asn Asp Leu Ser Gln	Tyr
365		370	375
Pro Val Phe Pro	Trp Val Leu Gln Asp	Tyr Val Ser Pro Thr	Leu
380		385	390
Asp Leu Ser Asn	Pro Ala Val Phe Arg	Asp Leu Ser Lys Pro	Ile
395		400	405
Gly Val Val Asn	Pro Lys His Ala Gln	Leu Val Arg Glu Lys	Tyr
410		415	420
Glu Ser Phe Glu	Asp Pro Ala Gly Thr	Ile Asp Lys Phe His	Tyr
425		430	435
Gly Thr His Tyr	Ser Asn Ala Ala Gly	Val Met His Tyr Leu	Ile
440		445	450
Arg Val Glu Pro	Phe Thr Ser Leu His	Val Gln Leu Gln Ser	Gly
455		460	465
Arg Phe Asp Cys	Ser Asp Arg Gln Phe	His Ser Val Ala Ala	Ala
470		475	480
Trp Gln Ala Arg	Leu Glu Ser Pro Ala	Asp Val Lys Glu Leu	Ile
485		490	495
Pro Glu Phe Phe	Tyr Phe Pro Asp Phe	Leu Glu Asn Gln Asn	Gly
500		505	510
Phe Asp Leu Gly	Cys Leu Gln Leu Thr	Asn Glu Lys Val Gly	Asp
515		520	525
Val Val Leu Pro	Pro Trp Ala Ser Ser	Pro Glu Asp Phe Ile	Gln
530		535	540
Gln His Arg Gln	Ala Leu Glu Ser Glu	Tyr Val Ser Ala His	Leu
545		550	555
His Glu Trp Ile	Asp Leu Ile Phe Gly	Tyr Lys Gln Arg Gly	Pro
560		565	570
Ala Ala Glu Glu	Ala Leu Asn Val Phe	Tyr Tyr Cys Thr Tyr	Glu
575		580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys
				590					595					600
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln
				605					610					615
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala
				620					625					630
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe
				635					640					645
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val
				650					655					660
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp
				665					670					675
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met
				680					685					690
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro
				695					700					705
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly
				710					715					720
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val
				725					730					735
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His
				740					745					750
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr
				755					760					765
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu
				770					775					780
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val
				785					790					795
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile
				800					805					810
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr
				815					820					825
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu
				830					835					840
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala
				845					850					855
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu
				860					865					870
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val
				875					880					885
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr
				890					895					900

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln
905 910
Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala
920 925 930
Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr
935 940 945
Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu
950 955 960
Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln
965 970 975
Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val
980 985 990
Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg
995 1000

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggacgcgtg ggcggacgcg tgggggctgt gaaaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctctctcgtgc ccagggctga 100
tgtgcgtctt ccagggctac tcatccaaag gcctaataca acgttctgtc 150
ttcaatctgc aaatctatgg ggctcctggg ctcttctgga ccttaactg 200
ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
gccttcaccc gcacactccg ttaccacact gggtcattgg catttggagc 350
cotcatcctg acccttgtgc agatagcccg ggtcatcttg gagtatattg 400
accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
cgcgaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550
cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
gtctcggaca aagtcacaga cctgctgctg ttctttggga agctgctggg 650

ggctcgaggc gtgggggtcc tgccttctt tttttctcc ggctcgatcc 700
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgcga gcgcttctt 800
 cagcgttttc ggcattgtgt tggacacgct ctctctctgc ttcttggaag 850
 acctggagcg gaacaacggc tccctggacc ggcctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgcagc tccggccctg atccaggact gcacccacc 1000
 cccaccgtcc agccatocaa cctcacttcg ccttacaggt ctccattttg 1050
 tggtaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
 acactttgag aggtcgaggc gggcgatca cctgagtcag gaggtcgaga 1150
 ccagcctgac caacatggtg aaacctccgt ctctattaaa aatacaaaaa 1200
 ttagccgaga gtgtggcat gcacctgtca tccagctac tcgggaggct 1250
 gaggcaggag aatcgcttga acccgaggag cagagggtgc agtgagccga 1300
 gatcgcgcca ctgcaactca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 36
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
 1 5 10 15
 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys
 20 25 30
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
 35 40 45
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
 50 55 60
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
 65 70 75
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 80 85 90
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
 95 100 105
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu
 110 115 120
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
 125 130 135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtctttacc agcccgga tgcg 24

<210> 39
 <211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggctctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtcttgac cgccgccggg ctcttggtac ctcagcgga ggcacggcg 50
tcggcgccgc gtggtatgt tcgtgtccga ttccgcaa gagttctacg 100
agggtgtcca gagccagagg gtccctctct tcgtggcctc ggacgtggat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctggttccag ttctgggtg gcaagaactt gaaactgcat 250
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
gctaatttag acctattgga tattcttcaa cctgatgaag acactatatt 350
ctttgtgtgt gactcccata ggccagtcga tgcgtgaat gtatacaacg 400
ataccagatg caaattactc attaaacaag atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600
gcccggagaa gagacatcct ctttgactac gacagtatg aatatcatgg 650
gacatcgta gccatggtga tgtttgagct ggcttggatg ctgtccaagg 700
acctgaatga catgctgtgg tgggcatcag ttggactaac agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgctg 900
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggctctgt gcatggacag aagcggctcc 1000
aggagtctct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgcggg aatgattga 1100
agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattocttt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcaattcatc caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaaagaagc agctgcgagc caccagcag 1350
 accattgccca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

	245		250		255
Asn Glu Asp Glu	Asn Thr Leu Ser	Val Asp Cys Thr Arg	Ile		
260		265	270		
Ser Phe Glu Tyr	Asp Leu Arg Leu Val	Leu Tyr Gln His Trp	Ser		
275		280	285		
Leu His Asp Ser	Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg	Phe		
290		295	300		
Lys Leu Trp Ser	Val His Gly Gln Lys	Arg Leu Gln Glu Phe	Leu		
305		310	315		
Ala Asp Met Gly	Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe	Gln		
320		325	330		
Ala Met Asp Ile	Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile	Glu		
335		340	345		
Glu Ser Ala Asn	Lys Phe Gly Met Lys	Asp Met Arg Val Gln	Thr		
350		355	360		
Phe Ser Ile His	Phe Gly Phe Lys His	Lys Phe Leu Ala Ser	Asp		
365		370	375		
Val Val Phe Ala	Thr Met Ser Leu Met	Glu Ser Pro Glu Lys	Asp		
380		385	390		
Gly Ser Gly Thr	Asp His Phe Ile Gln	Ala Leu Asp Ser Leu	Ser		
395		400	405		
Arg Ser Asn Leu	Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala	Lys		
410		415	420		
Lys Gln Leu Arg	Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu	Cys		
425		430	435		
Thr Asn Leu Val	Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser	Leu		
440		445	450		
Met Glu Gly Thr	Pro Asp Val Met Leu	Phe Ser Arg Pro Ala	Ser		
455		460	465		
Leu Ser Leu Leu	Ser Lys His Leu Leu	Lys Ser Phe Val Cys	Ser		
470		475	480		
Thr Lys Asn Arg	Arg Cys Lys Leu Leu	Pro Leu Val Met Ala	Ala		
485		490	495		
Pro Leu Ser Met	Glu His Gly Thr Val	Thr Val Val Gly Ile	Pro		
500		505	510		
Pro Glu Thr Asp	Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg	Ala		
515		520	525		
Phe Glu Lys Ala	Ala Glu Ser Thr Ser	Ser Arg Met Leu His	Asn		
530		535	540		
His Phe Asp Leu	Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg	Ser		
545		550	555		
Lys Phe Leu Asp	Ala Leu Ile Ser Leu	Leu Ser			

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacctcagc gcgagcgcca ggcgccgggc cgccgtggct atgntcgtgt 50
 cogatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcattttctg agcataaaga acagtttcat 250
 tattttattc tcataaaactg tggagctaata gtgacacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcgaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgta 50

<210> 46

<211> 3089
<212> DNA
<213> Homo sapiens

<400> 46
caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200
gagtcaagaa acccccccct cttgagctat ttacagcttt taacaattga 250
gtaaagtacg ctccgggtcac catggtgaca gccgcctcgg gtcccgtctg 300
ggcagcgctc ctgctctttc tctgatgtg tgagatccgt atggtggagc 350
tcaccttga cagagctgtg gccagcggct gccaacggtg ctgtgactct 400
gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggcgg 450
ccccacgcc ctgcctgaga tcagacccta cattaatat accatcctga 500
agggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
agggagggtc cccaagggga gcctggccct cagggcagca agggtgacaa 600
gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
tctcagtggg ccgcaagacg gccctgcaca gcggcgagga cttccagacg 700
ctgctcttcg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750
gaccggccag ttgtctgctc cctgcgttg catctacttc ttcagcctca 800
atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
cagaaagagg ctgtcatcct gtacgcgcag ccagcgcgag gcagcatcat 900
gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
tgcggtctct caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
gacacctaca tcaccttcag cggccacctc atcaaggccg aggacgactg 1050
agggcctctg ggccacccct ccgctgggag agctcagggt cttgtcccgt 1100
ccctgcagg gctcagtttg cactgctgtg aagcaggaag gccaggagg 1150
tccccgggga cctggcattc tggggagacc ctgcttctat cttggtgcc 1200
atcatccctc ccagcctatt tctgctctc tcttctctct tggacctatt 1250
ttaagaagct tgtaacctc aatattctag aactttccca gcctcgtagc 1300
ccagcacttc taaaacttgg aaatgcatgc gaatcaccg gggttcgtgt 1350
taaatgcaga ttctgactca gcaggctctg gtgggtccag gattctgtgt 1400
ttctcatatg ttctgggtg atgctgatgg ggtcagtcta tgaaccacac 1450

tggagcaacc aggttctagg acttttctcaa tattctagta ctttctgaac 1500
 attctggaat cctccccaca ttctagaatt ctcccaacat ttttttttct 1550
 tgagacagag tcttgcctcg ttgccagggc tagagtgcag tgggtcaatc 1600
 tcagttcact goaacctctg cctcccgggt tcaagcgatt cttctgcctc 1650
 agcctcccta gtggctggga ttacaggcgc ctgctaccat gcctgggctaa 1700
 tttttgtatt tttagtagag atgggggttc accatattgg ccaggctggg 1750
 cttgaactcc tgacttcagg tgaccacccc gcctcgccct ctcaaatgac 1800
 tgggattaca ggtgtgagcc accgtgcctg gccaatccca acattcttaa 1850
 attctctcat cctccagggt ctcccgctgc tatgttctct ttacoccttc 1900
 cccctcttct cttgctcagg cctgcaccac tgcagccacc gttcatttat 1950
 tcattcatta aacactgagc actcactctg tgctgggtcc cgggaagggt 2000
 gaggggggtca gacacaggcc ctgcccctgc cctcagtgac tggccagtcc 2050
 agcccaggcg gggagagatg tgtacatagg ttttaaagca gaccagagc 2100
 tcatgggggc ctgtgttctg ggtgttcagg tgctgtcgtt cctccattac 2150
 ccaactgctcc ccaaggctgg tgggacgggg tcccggtggc aggggcaggt 2200
 atctccttcc cgttctcat ccaactgccc agtgctcctc gttacagcaa 2250
 accccagggg gccttgcca ggtcaagggt tctgtgagga gaggaccag 2300
 gagtgtgggg gcatttgggg ggtgaagtgg ccccccgaaga atggaacca 2350
 caccocatgc tctccccaca gctgatacgg catcctgcga gaagacctgc 2400
 cctcctcact gggatccctt tctgctctcc tcccagggct ctgccagggc 2450
 cttgctcagt ccttccacc aaagtcatct gaacttcctg tccccagggt 2500
 cctccagctg cctcagaca ctgatgtctg tcccagggtg ctctctgcc 2550
 ctcatgcccc tctaccggc ccagtgcctc gactctccag gctttatcaa 2600
 ggtgctaagg cccgggtggg cagctctctg tctcagagcc ctctccggc 2650
 ctgggtgctgc ctttacaac acctgcagga gaaggccac ggaagccca 2700
 ggcttttagg cctcagcag gtctggggag ctagagcaaa ggaggacct 2750
 caggccttcc gtttcttctt ccagggtggg gtggcctggt gttcccttag 2800
 ccttccaaac ccagggtgcc tgcccttctc ccagaggga ggcgccctcc 2850
 gcccatgtgt gctcatgcag actctggggc tgagggtgcc cgggggtgga 2900
 tctctgtgtc tcacagccga gggagccgtg gctccatggc catgatgacg 2950
 aaacagggtc tgaccaagtg ccaggaagac ctgtgctata aaccacctg 3000
 cctgatcctg ccctgcctg accccgccac gccctgccgt ccagcatgat 3050

taaagaatgc tgtctcctct tggaaaaaaaa aaaaaaaaa 3089

<210> 47
<211> 259
<212> PRT
<213> Homo sapiens

<220>
<221> Signal Peptide
<222> 1-20
<223> Signal Peptide

<220>
<221> N-glycosylation Site
<222> 72-75
<223> N-glycosylation Site

<220>
<221> Clq Domain Proteins
<222> 144-178, 78-111, 84-117
<223> Clq Domain Proteins

<400> 47
Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu
1 5 10 15
Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp
20 25 30
Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp
35 40 45
Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
50 55 60
Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
65 70 75
Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
80 85 90
Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
95 100 105
Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
110 115 120
Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
125 130 135
His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
140 145 150
Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
155 160 165
Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
170 175 180
Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
185 190 195
Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

	200		205		210
Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val					
	215		220		225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser					
	230		235		240
Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys					
	245		250		255
Ala Glu Asp Asp					

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtcccgta gccaggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
 actcgaacgc agttgcttcg ggacccagga cccctcggg cccgacccgc 50
 caggaaagac tgaggccgcg gctgccccg cccggctccg tgcgcgccg 100
 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccg 150
 tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200
 tgccagtgcg gccagccaca gacagtcttc tgactgccc gccaggggac 250

cacggtgccc cgagacgtgc caccgcacac ggtggggctg tacgtctttg 300
 agaacggcat caccatgctc gacgcaggca gctttgccgg cctgccgggc 350
 ctgcagctcc tggacctgtc acagaaccag atcgccagcc tcccagcgg 400
 ggtcttccag cactcgcga acctcagcaa cctggacctg acggccaaca 450
 ggctgcatga aatcaccaat gagaccttcc gtggcctgcg gcgcctcgag 500
 cgctcttacc tgggcaagaa ccgcattccg cacatccagc ctggtgcctt 550
 cgacacgctc gaccgcctcc tggagctcaa gctgcaggac aacgagctgc 600
 gggcactgcc cccgctgcgc ctgcgccgcc tgtgctgctt ggacctcage 650
 cacaacagcc tcttgccctt ggagccgggc atcctggaca ctgccaacct 700
 ggagcgctgc cggtcgctg gtctggggct gcagcagctg gacgaggggc 750
 tcttcagccg ctctgcgaac ctccacgacc tggatgtgct cgacaaccag 800
 ctggagcgag tgccaactgt gatccgaggc ctccggggcc tgacgcgcct 850
 gcggctgccc ggcaacaccc gcattgccca gctgcggccc gaggacctgg 900
 ccggcctggc tgccctgcag gagctggatg tgagcaacct aagcctgcag 950
 gccctgcctg gcgacctctc gggcctcttc cccgcctcgc ggtgctggc 1000
 agctgcccgc aacccttca actgcgtgtg cccctgagc tggtttgccc 1050
 cctgggtgcg cgagagccac gtcacactgg ccagccctga ggagacgcgc 1100
 tgccacttcc cgccaagaa cgctggccgg ctgctcctgg agcttgacta 1150
 cgccgacttt ggtgcccag ccaccaccac cacagccaca gtgcccacca 1200
 cgaggccctt ggtgcgggag cccacagcct tgtcttctag ctggtcctt 1250
 acctggctta gcccacagc gccggcactt gaggccccc gcccgccctc 1300
 cactgcccga ccgactgtag ggctgttccc ccagccccc gactgcccac 1350
 cgtccacctg cctcaatggg ggcacatgcc acctggggag acggcaccac 1400
 ctggcgtgct tgtgcccga aggttctcag ggctgtact gtgagagcca 1450
 gatggggcag gggacacggc ccagccctac accagtcaag ccgagggcac 1500
 caggttccct gacctgggc atcgagccgg tgagccccc ctccctgcgc 1550
 gtgggggtgc agcgtacact ccaggggagc tccgtgcagc tcaggagcct 1600
 ccgtctcacc tatcgcaacc tatcgggccc tgataagcgg ctggtgacgc 1650
 tgcgactgcc tgccctgcct gctgagtaca cggtcaccca gctgcggccc 1700
 aacgcgaact actccgtctg tgtcatgcct ttggggcccc ggcggtgccc 1750
 ggagggcgag gaggcctgcg gggaggccca tacaccccca gccgtccact 1800
 ccaaccacgc ccagtcacc caggcccgcg agggcaacct gccgctcctc 1850

attgcgcccg ccttgccgc ggtgctcctg gccgcgctgg ctgcggtggg 1900
 ggcagcctac tgtgtgcggc gggggcgggc catggcagca ggggtcagg 1950
 acaaaggcca ggtggggcca ggggctgggc ccttggaact ggaggagtg 2000
 aaggtccctt tggagccagg cccgaaggca acagagggcg gtggagaggg 2050
 cctgcccagc gggctctagt gtgaggtgcc actcatgggc ttcccagggc 2100
 ctggcctcca gtcacccctc cagcgaagc cctacatcta agccagagag 2150
 agacaggcca gctggggccg ggtctcagc cagtgaagtg gccagccccc 2200
 tcctgctgcc acaccagta agttctcagt cccaacctcg gggatgtgtg 2250
 cagacagggc tgtgtgacca cagctggggc ctgttccctc tggacctcgg 2300
 ttctctcctc tgtgagatgc tgtggcccag ctgacgagcc ctaactccc 2350
 cagaaccgag tgcctatgag gacaggtgcc gccctgccct ccgcaacgtg 2400
 cagtccctgg gcacggcggg ccttgccatg tgctggtaac gcatgctgg 2450
 gtctgctggg gctotccac tccaggcgga cctggggggc cagtgaagga 2500
 agctcccgga aagagcagag ggagagcggg taggcggctg tgtgactcta 2550
 gtottggccc caggaagcga aggaacaaaa gaaactggaa aggaagatgc 2600
 tttaggaaca tgttttgctt ttttaaaata tatatatta taagagatcc 2650
 tttcccatth attctgggaa gatgtttttc aaactcagag acaaggactt 2700
 tggtttttgt aagacaaacg atgatatgaa ggccttttgt aagaaaaaat 2750
 aaaagatgaa gtgtgaaa 2768

<210> 52

<211> 673

<212> PRT

<213> Homo sapiens

<400> 52

Met	Cys	Ser	Arg	Val	Pro	Leu	Leu	Leu	Pro	Leu	Leu	Leu	Leu	Leu	15
1				5					10						
Ala	Leu	Gly	Pro	Gly	Val	Gln	Gly	Cys	Pro	Ser	Gly	Cys	Gln	Cys	30
				20					25						
Ser	Gln	Pro	Gln	Thr	Val	Phe	Cys	Thr	Ala	Arg	Gln	Gly	Thr	Thr	45
				35					40						
Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe	60
				50					55						
Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Gly	Ser	Phe	Ala	Gly	Leu	75
				65					70						
Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser	90
				80					85						
Leu	Pro	Ser	Gly	Val	Phe	Gln	Pro	Leu	Ala	Asn	Leu	Ser	Asn	Leu	

	95	100	105
Asp Leu Thr Ala Asn Arg Leu His Glu	110	Ile Thr Asn Glu Thr Phe	120
Arg Gly Leu Arg Arg Leu Glu Arg Leu Tyr	125	Leu Gly Lys Asn Arg	135
Ile Arg His Ile Gln Pro Gly Ala Phe	140	Asp Thr Leu Asp Arg Leu	150
Leu Glu Leu Lys Leu Gln Asp Asn Glu	155	Leu Arg Ala Leu Pro	165
Leu Arg Leu Pro Arg Leu Leu Leu Leu	170	Asp Leu Ser His Asn Ser	180
Leu Leu Ala Leu Glu Pro Gly Ile Leu	185	Asp Thr Ala Asn Val Glu	195
Ala Leu Arg Leu Ala Gly Leu Gly Leu	200	Gln Gln Leu Asp Glu Gly	210
Leu Phe Ser Arg Leu Arg Asn Leu His	215	Asp Leu Asp Val Ser Asp	225
Asn Gln Leu Glu Arg Val Pro Pro Val	230	Ile Arg Gly Leu Arg Gly	240
Leu Thr Arg Leu Arg Leu Ala Gly Asn	245	Thr Arg Ile Ala Gln Leu	255
Arg Pro Glu Asp Leu Ala Gly Leu Ala	260	Ala Leu Gln Glu Leu Asp	270
Val Ser Asn Leu Ser Leu Gln Ala Leu	275	Pro Gly Asp Leu Ser Gly	285
Leu Phe Pro Arg Leu Arg Leu Leu Ala	290	Ala Ala Arg Asn Pro Phe	300
Asn Cys Val Cys Pro Leu Ser Trp Phe	305	Gly Pro Trp Val Arg Glu	315
Ser His Val Thr Leu Ala Ser Pro Glu	320	Glu Thr Arg Cys His Phe	330
Pro Pro Lys Asn Ala Gly Arg Leu Leu	335	Leu Glu Leu Asp Tyr Ala	345
Asp Phe Gly Cys Pro Ala Thr Thr Thr	350	Thr Ala Thr Val Pro Thr	360
Thr Arg Pro Val Val Arg Glu Pro Thr	365	Ala Leu Ser Ser Ser Leu	375
Ala Pro Thr Trp Leu Ser Pro Thr Ala	380	Pro Ala Thr Glu Ala Pro	390
Ser Pro Pro Ser Thr Ala Pro Pro Thr	395	Val Gly Pro Val Pro Gln	405
Pro Gln Asp Cys Pro Pro Ser Thr Cys		Leu Asn Gly Gly Thr Cys	

410	415	420
His Leu Gly Thr Arg	His His Leu Ala Cys	Leu Cys Pro Glu Gly
425	430	435
Phe Thr Gly Leu Tyr	Cys Glu Ser Gln Met	Gly Gln Gly Thr Arg
440	445	450
Pro Ser Pro Thr	Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu Thr
455	460	465
Leu Gly Ile Glu	Pro Val Ser Pro Thr	Ser Leu Arg Val Gly Leu
470	475	480
Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg
485	490	495
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val Thr
500	505	510
Leu Arg Leu Pro	Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln Leu
515	520	525
Arg Pro Asn Ala	Thr Tyr Ser Val Cys	Val Met Pro Leu Gly Pro
530	535	540
Gly Arg Val Pro	Glu Gly Glu Glu Ala	Cys Gly Glu Ala His Thr
545	550	555
Pro Pro Ala Val	His Ser Asn His Ala	Pro Val Thr Gln Ala Arg
560	565	570
Glu Gly Asn Leu	Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala Val
575	580	585
Leu Leu Ala Ala	Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val Arg
590	595	600
Arg Gly Arg Ala	Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln Val
605	610	615
Gly Pro Gly Ala	Gly Pro Leu Glu Leu	Glu Gly Val Lys Val Pro
620	625	630
Leu Glu Pro Gly	Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala Leu
635	640	645
Pro Ser Gly Ser	Glu Cys Glu Val Pro	Leu Met Gly Phe Pro Gly
650	655	660
Pro Gly Leu Gln	Ser Pro Leu His Ala	Lys Pro Tyr Ile
665	670	

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
tggatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 56
gaatcatcca cgcacctgca gctctgctga gagagtgcga gccgtggggg 50
ttttgagctc atcttcatca ttcatatgag gaaataagtg gtaaaatcct 100
tggaaaataca atgagactca tcagaaacat ttacatatct ttagtagtattg 150
ttatgacagc agagggtgat gctccagagc tgccagaaga aagggaactg 200
atgaccaact gctccaacat gtctctaaga aaggttcccg cagacttgac 250
cccagccaca acgacactgg atttatccta taacctcctt ttccaactcc 300
agagttcaga ttttcattct gtctccaaac tgagagtttt gattctatgc 350
cataacagaa ttcaacagct ggatctcaaa acctttgaat tcaacaagga 400
gttaagatat ttagatttgt ctaataacag actgaagagt gtaacttggt 450
atttactggc aggtctcagg tatcttagatc tttcttttaa tgactttgac 500
accatgccta tctgtgagga agctggcaac atgtcacacc tggaaatcct 550
agggttgagt ggggcaaaaa taaaaaatc agatttccag aaaattgctc 600
atctgcatct aaatactgct ttcttaggat tcagaactct toctcattat 650
gaagaaggta gctgcccatt cttaaacaca aaaaaactgc acattgtttt 700
accaatggac acaaatctct ggggtctttt gcgtgatgga atcaagactt 750
caaaaatatt agaatgaca aatatagatg gcaaaagcca atttgtaagt 800
tatgaaatgc aacgaaatct tagtttagaa aatgctaaga catcggttct 850
attgcttaat aaagttgatt tactctggga cgaccttttc cttatcttac 900

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
				95					100					105	
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	
				380					385					390	
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	
				395					400					405	

Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp	Pro
410	415	420	
Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser	Asp
425	430	435	
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp	Leu
440	445	450	
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His	Leu
455	460	465	
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr	Asp
470	475	480	
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn	Ile
485	490	495	
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln	Ser
500	505	510	
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe	Arg
515	520	525	
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr	Ser
530	535	540	
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu	Tyr
545	550	555	
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu	His
560	565	570	
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val	Val
575	580	585	
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu	His
590	595	600	
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr	Gln
605	610	615	
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys	Arg
620	625	630	
Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp	Ser
635	640	645	
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu	Asp
650	655	660	
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro	Gly
665	670	675	
Lys Ser Ile Ser	Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser	Tyr
680	685	690	
Lys Ser Ile Phe	Val Leu Ser Pro Asn	Phe Val Gln Asn Glu	Trp
695	700	705	
Cys His Tyr Glu	Phe Tyr Phe Ala His	His Asn Leu Phe His	Glu
710	715	720	

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725					730					735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa totgtttotca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata cttggaatgg cccaaggata ggtgtaaatg 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

<400> 61
 gggggctttc ttgggcttgg ctgcttgga cacctgcctc caaggaccgg 50
 cctcgagggg gtcgccggga aaggaggga agaaggaagg gcggggccgg 100

ccccctgcg cccgccccgc gcctctgcgc gccccgtcc gccccggccc 150
agccccagccc agccccgcgg gccggtcaca cgcgcagcca gccggcccgc 200
tcccgcgccc aagcgcgccc ctctgctgtg ccctgcgccc ttgccccgcg 250
ccagcttctg cgcccccagc ccgcccggcg cccccggta ccgtgacct 300
gccctggggc cggggcggag caggcatgtc ccgcccggg accgctaccc 350
cagcgcgtgc cctggtgtc ctggcagtga ccctggccgg ggtcggagcc 400
caggggcgag ccctcgagga ccctgattat tacgggcagg agatctggag 450
ccgggagccc tactacgcgc gcccgagacc cgagctcgag accttctctc 500
cgccgctgcc tgcggggccc ggggaggagt gggagcggcg ccgcgaggag 550
cccaggccgc ccaagagggc caccaagccc aagaaagtc ccaagaggga 600
gaagtgcgct cggagagccc ctccaccagg taaacacagc aacaaaaag 650
ttatgagaac caagagctct gagaaggctg ccaacagta tcacagtgtc 700
cgtgtgcccc gtgaagatgt cagagagagt tgcccacctc ttggtctgga 750
aaccttaaaa atcacagact tccagctcca tgccctccag gtgaagcgct 800
atggcctggg ggcacatcga gggagactca acatccaggc gggcattaat 850
gaaaatgatt tttatgacgg agcgtggtgc gcgggaagaa atgacctcca 900
gcagtggatt gaagtggatg ctcgcgccct gaccagattc actggtgtca 950
tcactcaagg gaggaactcc ctctggctga gtgaactggg gatcctctat 1000
aaggtcatgg tgagcaatga cagccacacg tgggtcactg ttaagaatgg 1050
atctggagac atgatatgtg agggaaacag tgagaaggag atccctgttc 1100
tcaatgagct acccgcccc atggtggccc gctacatccg cataaacctc 1150
cagtcctggt ttgataatgg gagcatctgc atgagaatgg agatcctggg 1200
ctgcccactg ccagatccta ataattatta tcaccgcgg aacgagatga 1250
ccaccactga tgacctggat ttaagcacc acaattataa ggaaatgcgc 1300
cagttgatga aagttgtgaa tgaaatgtgt cccaatatca ccagaattta 1350
caacattgga aaaagccacc agggcctgaa gctgtatgct gtggagatct 1400
cagatcaccc tggggagcat gaagtccgtg agcccaggtt ccactacatc 1450
gcggggggccc acggcaatga ggtgctgggc cgggagctgc tctgtctgct 1500
ggtgcagttc gtgtgtcagg agtacttggc ccggaatgag cgcacgtcc 1550
acctggtgga ggagacgcg attcacgtcc tcccctcccc caaccccgat 1600
ggctacgaga aggcctacga agggggctcg gagctgggag gctggtccct 1650
gggacgctgg acccacgatg gaattgacat caacaacaac tttcctgatt 1700

taacacgct gctctgggag gcagaggatc gacagaatgt ccccaggaaa 1750
 gtcccaatc actatattgc aatccctgag tggtttctgt cggaaaaatgc 1800
 cagggtggct gccgagacca gagcagtcac agcctggatg gaaaaaatcc 1850
 cttttgtgct gggcggcaac ctgcaggcgg gcgagctggt ggtggcgtat 1900
 ccctacgacc tggcgcggtc cccctggaag acgcaggaac acacccccac 1950
 ccccgatgac cactgtttcc gctggctggc ctactcctat gcctccacac 2000
 accgcctcat gacagacgcc cggaggaggg tgtgccacac ggaggacttc 2050
 cagaaggagg agggcactgt caatggggcc tctgggcaca ccgtcgtgtg 2100
 aagtctgaac gatttcagct accttcatac aaactgcttc gaactgtcca 2150
 tctactgtgg ctgtgataaa taccacatg agagccagct gcccgaggag 2200
 tgggagaata accgggaatc tctgatctgt ttcattggagc aggttcatcg 2250
 tggcattaaa ggcttgggtg gagattcaca tggaaaagga atcccaaacg 2300
 ccattatctc cgtagaaggc attaaccatg acatccgaac agccaacgat 2350
 ggggattact ggcgcctcct gaaccctgga gagtatgtgt tcacagcaaa 2400
 ggccgaaggt ttcactgcat ccaccaagaa ctgtatgggt ggctatgaca 2450
 tgggggcacac aagggtgtgac ttcacactta gcaaaaccaa catggccagg 2500
 atccgagaga tcatggagaa gtttgggaag cagcccgta ccctgccagc 2550
 caggcggctg aagctgcggg ggcggaagag acgacagcgt gggtgacct 2600
 cctgggcctc tgagactcgt ctgggaccca tgcaaatata accaacctgg 2650
 tagtagctcc atagtggact cactcactgt tgttcctct gtaattcaag 2700
 aagtgcctgg aagagagggt gcattgtgag gcaggtccca aaagggaagg 2750
 ctggagcgtg aggctgtttt ctttctttg ttccattta tccaaataac 2800
 ttggacagag cagcagagaa aagctgatgg gagtgagaga actcagcaag 2850
 ccaacctggg aatcagagag agaaggagaa ggaggggagc ctgtccgttc 2900
 agagcctctg gctgcataga aaaggattct ggtgctccc ctgtttgctg 2950
 ggcagcaagg gttccacgtg catttgcaat ttgcacagct aaaaattgcag 3000
 catttcccca gctgggctgt cccaaatgtt accatttgag atgtccccag 3050
 gcgtcctaag agaatccacc ctctctggcc ctggggacatt gcaagctgct 3100
 acaataaat tctgtgttct tttgacaata gcgtcattgc caagtgcaca 3150
 tcagtgcacc tcttgaatct gtttagtctc ctttttcaac aaaggagtgt 3200
 gttcagaaaa ggagagagag gctgagatca ttcaggagtt tgttgggcag 3250
 caagcatgga gttcttgc caaattctgg gtccataaac aaccccaaaa 3300

gtccctgctg atccagtagc cctggaggtt ccccaggtag ggagagccag 3350
 aggtgccagc cttcctgaag ggccagaaaa tttagcctgg atctcctctt 3400
 ttacctgcta ggactggaaa gagccagaag tggggtggcc tgaagccctc 3450
 tctctgcttg aggtattgcc cctgtgtgga attgagtctc catgggttgg 3500
 cctcatatca gcttgggagt tatttttgat atgtagaatg ccagatcttc 3550
 cagattaggc taaatgtaat gaaaacctct taggattatc tgtggagcat 3600
 cagtttggga agaattattg aattatcttg caagaaaaaa gtatgtctca 3650
 ctttttgta atgttgctgc ctcatgacc tgggaaaaat gaaaaaaaaa 3700
 aataaagcaa atggttaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
 Met Ser Arg Pro Gly Thr Ala Thr Pro Ala Leu Ala Leu Val Leu
 1 5 10 15
 Leu Ala Val Thr Leu Ala Gly Val Gly Ala Gln Gly Ala Ala Leu
 20 25 30
 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro
 35 40 45
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
 50 55 60
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

185	190	195
Glu Val Asp Ala Arg	Arg Leu Thr Arg	Phe Thr Gly Val Ile Thr
200		210
Gln Gly Arg Asn Ser	Leu Trp Leu Ser	Asp Trp Val Thr Ser Tyr
215		225
Lys Val Met Val Ser	Asn Asp Ser His	Thr Trp Val Thr Val Lys
230		240
Asn Gly Ser Gly Asp	Met Ile Phe Glu	Gly Asn Ser Glu Lys Glu
245		255
Ile Pro Val Leu Asn	Glu Leu Pro Val	Pro Met Val Ala Arg Tyr
260		270
Ile Arg Ile Asn Pro	Gln Ser Trp Phe	Asn Asn Gly Ser Ile Cys
275		285
Met Arg Met Glu Ile	Leu Gly Cys Pro	Leu Pro Asp Pro Asn Asn
290		300
Tyr Tyr His Arg Arg	Asn Glu Met Thr	Thr Thr Asp Asp Leu Asp
305		315
Phe Lys His His Asn	Tyr Lys Glu Met	Arg Gln Leu Met Lys Val
320		330
Val Asn Glu Met Cys	Pro Asn Ile Thr	Arg Ile Tyr Asn Ile Gly
335		345
Lys Ser His Gln Gly	Leu Lys Leu Tyr	Ala Val Glu Ile Ser Asp
350		360
His Pro Gly Glu His	Glu Val Gly Glu	Pro Glu Phe His Tyr Ile
365		375
Ala Gly Ala His Gly	Asn Glu Val Leu	Gly Arg Glu Leu Leu Leu
380		390
Leu Leu Val Gln Phe	Val Cys Gln Glu	Tyr Leu Ala Arg Asn Ala
395		405
Arg Ile Val His Leu	Val Glu Glu Thr	Arg Ile His Val Leu Pro
410		420
Ser Leu Asn Pro Asp	Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly Ser
425		435
Glu Leu Gly Gly Trp	Ser Leu Gly Arg	Trp Thr His Asp Gly Ile
440		450
Asp Ile Asn Asn Asn	Phe Pro Asp Leu	Asn Thr Leu Leu Trp Glu
455		465
Ala Glu Asp Arg Gln	Asn Val Pro Arg	Lys Val Pro Asn His Tyr
470		480
Ile Ala Ile Pro Glu	Trp Phe Leu Ser	Glu Asn Ala Thr Val Ala
485		495
Ala Glu Thr Arg Ala	Val Ile Ala Trp	Met Glu Lys Ile Pro Phe

500	505	510
Val Leu Gly Gly Asn Leu Gln Gly Gly Glu Leu Val Val Ala Tyr		
515	520	525
Pro Tyr Asp Leu Val Arg Ser Pro Trp Lys Thr Gln Glu His Thr		
530	535	540
Pro Thr Pro Asp Asp His Val Phe Arg Trp Leu Ala Tyr Ser Tyr		
545	550	555
Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg Arg Arg Val Cys		
560	565	570
His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val Asn Gly Ala		
575	580	585
Ser Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser Tyr Leu		
590	595	600
His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp Lys		
605	610	615
Tyr Pro His Glu Ser Gln Leu Pro Glu Glu Trp Glu Asn Asn Arg		
620	625	630
Glu Ser Leu Ile Val Phe Met Glu Gln Val His Arg Gly Ile Lys		
635	640	645
Gly Leu Val Arg Asp Ser His Gly Lys Gly Ile Pro Asn Ala Ile		
650	655	660
Ile Ser Val Glu Gly Ile Asn His Asp Ile Arg Thr Ala Asn Asp		
665	670	675
Gly Asp Tyr Trp Arg Leu Leu Asn Pro Gly Glu Tyr Val Val Thr		
680	685	690
Ala Lys Ala Glu Gly Phe Thr Ala Ser Thr Lys Asn Cys Met Val		
695	700	705
Gly Tyr Asp Met Gly Ala Thr Arg Cys Asp Phe Thr Leu Ser Lys		
710	715	720
Thr Asn Met Ala Arg Ile Arg Glu Ile Met Glu Lys Phe Gly Lys		
725	730	735
Gln Pro Val Ser Leu Pro Ala Arg Arg Leu Lys Leu Arg Gly Arg		
740	745	750
Lys Arg Arg Gln Arg Gly		
755		

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gtttctcaatg agctaccgct cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
ctaagaggac aagatgaggc cggcctctc atttctccta gcccttctgt 50
tcttctctgg ccaagctgca ggggatttgg gggatgtggg acotccaatt 100
cccagcccg gcttcagctc ttccaggt gttgaactca gctccagctt 150
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtctc tgtttccctg ccagacacca cctttccctg 300
ggacagagtg gaacgcttg aattcacagc tcatgttctt tctcagaagt 350
ttgagaaaga actttctaaa gtgagggaat atgtccaatt aattagtgtg 400
tatgaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacctg aactggactt cgagctgctc aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
agctcagaaa ttgttgacca gctggaggtg gagataagaa atatgactct 600
cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650
gcgcagaaat cgtggctctg aagaccaagc tgaagagtg tgaggcctct 700
aaagatcaaa acaccctgt cgtccaccct cctccactc caggagctg 750
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
actggagagg gttttcttat ctatattgtg cttgggtagg ggattactct 850
ccccagcatc caaacaaggt actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950
 tattgtatat aaatgctcga gagttgcgga tcacctatgg ccaaggtagt 1000
 ggtacagcag tttaacacaa caacatgtac gtcaacatgt acaacaccgg 1050
 gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100
 ctctccctaa tgctgcctat aataaccgct ttcatatgc taatgttgct 1150
 tggcaagata ttgactttgc tgggatgag aatggattgt gggttattta 1200
 ttcaactgaa gccagcactg gtaacatggt gattagtaaa ctcaatgaca 1250
 ccacacttca ggtgctaaac acttggtata ccaagcagta taaaccatct 1300
 gcttctaacg ccttcattgt atgtgggggt ctgtatgcca cccgtactat 1350
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacaggga 1400
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500
 ttacctctgc aattatgac tttctgtct gcagaagccc cagtaagctg 1550
 tttaggagt aggggtgaaag agaaaatggt tgttgaaaaa atagtcttct 1600
 ccacttact agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650
 gcaatgttta ggtgcatagt tctaccacac tagagatcta ggacatttgt 1700
 cttgatttgg tgagttctct tgggaatcat ctgctcttc aggcgcattt 1750
 tgcaataaag tctgtctagg gtgggattgt cagaggctta ggggcaactg 1800
 gggcctagt aagcctactg tgaggaggct tcactagaag ccttaatta 1850
 ggaattaagg aacttaaaac tcagtatggc gtctagggat tctttgtaca 1900
 ggaaatattg ccaatgact agtcctcatc catgtagcac cactaattct 1950
 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatctgg 2000
 agctctcga gggaccaaact ctccaacttt ttttccct cactagcacc 2050
 tggaatgatg ctttgatgt ggcagataag taaatttggc atgcttatat 2100
 attctacatc tgtaaagtgc tgagttttat ggagagaggc ctttttatgc 2150
 attaaattgt acatggcaaa taaatccag aaggatctgt agatgaggca 2200
 cctgctttt ctttctctc attgtccacc ttactaaaag tcagtagaat 2250
 cttctacctc ataacttctt tccaaaggca gctcagaaga ttagaaccag 2300
 acttactaac caattccacc ccccaaccaac ccccttctac tgccactttt 2350
 aaaaaaatta atagttttct atggaactga tctaagatta gaaaaattaa 2400
 ttttctttaa ttcatattg gacttttatt tacatgactc taagactata 2450
 agaaaaatcg atggcagtga caaagtgcta gcattttatt ttatctaata 2500

aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcatgt 2550
 aattttttgcc tttgtttaag cctggaactt gtaagaaaat gaaaatttaa 2600
 tttttttttc taggacgagc tatagaaaag ctattgagag tatctagtta 2650
 atcagtgacg tagttggaaa ccttgctggg gtatgtgatg tgcttctgtg 2700
 cttttgaatg acatttatcat ctagtctttg tctatttttc ctttgatgtt 2750
 caagtcctag tctataggat tggcagttta aatgctttac tccocctttt 2800
 aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
 aaaa 2854

<210> 67
 <211> 510
 <212> PRT
 <213> Homo sapiens

<400> 67
 Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu 15
 1 5 10
 Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro 30
 20 25
 Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser 45
 35 40
 Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu 60
 50 55
 Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly 75
 65 70
 Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro 90
 80 85
 Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr 105
 95 100
 Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val 120
 110 115
 Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu 135
 125 130
 Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser 150
 140 145
 Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu 165
 155 160
 Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser 180
 170 175
 Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr 195
 185 190
 Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu 210
 200 205

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu
				215					220					225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro
				230					235					240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser
				245					250					255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu
				260					265					270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys
				275					280					285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu
				290					295					300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr
				305					310					315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly
				320					325					330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr
				335					340					345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val
				350					355					360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr
				365					370					375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn
				380					385					390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met
				395					400					405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr
				410					415					420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met
				425					430					435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr
				440					445					450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly
				455					460					465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser
				470					475					480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp
				485					490					495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln
				500					505					510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

gctctgaaga ccaagctgaa agagtgtgag gcctctaaag atcaaacacc 50
cctgtcgtcc accctcctcc cactccaggg agctgtggtc atggtggtgt 100
ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agagggtttt 150
cttatctata tgggtgcttg ggtagggtt actctcccca gcatccaaac 200
aaaggngatgt attggngggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtatgggtac agcagtttac 350
aacaacaaca tgtactgcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

tctcgcat agtaataat ctcgaaagg cgagaaagaa gctgtctcca 50
tcttgtctgt atccgctgct cttgtgacgt tgtggagatg gggagcgtcc 100
tggggctgtg ctccatggcg agctggatg catgtttgtg tggaagtgcc 150
cogtgtttgc tatgccgatg ctgtcctagt ggaacaact ccaattgaac 200
tagattgac tatgcacttt tcttgcctgt tggagtatgt gtagcttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacatttttg ttggtataa 350
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctct 400
ctttactaat gatcaaagt aagagtagca gtgacctag agctgcagtg 450
cacaatggat tttggtctt taaatttgct gcagcaattg caattattat 500
tggggcattc ttcattccag aaggaaactt tacaactgtg tggttttatg 550
taggcattgc aggtgccttt tgtttcatcc tcatacaact agtcttactt 600
attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
agggaaactg agatgttggg atgcagcctt gttatcagct acagctctga 700
attatctgct gtctttagtt gctatcgtcc tgttcttttg ctactacact 750
catccagcca gttgttcaga aaacaaggcg ttcacagtgt tcaacatgct 800
cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
cacaaccaag atctggtttg ttacagtcct cagtaattac agtctacaca 900
atgtatttga catggtcagc tatgaccaat gaaccagaaa caaattgcaa 950
cccaagtcta ctaagcataa ttggctacaa tacaacaagc actgtcccaa 1000
aggaagggca gtcagtcag ttggtggcatg ctcaaggaat tataggacta 1050
attctctttt tgttgtgtgt attttattcc agcatccgta cttcaaacaa 1100
tagtcagggt aataaactga ctctaacaag tgatgaatct acattaatag 1150
aagatgggtg agctagaagt gatggatcac tggaggatgg ggacgatgtt 1200
caccgagctg tagataatga aagggatggg gtcacttaca gttattcctt 1250
ctttcacttc atgcttttcc tggcttcaact ttatatcatg atgaccotta 1300
ccaactggtc caggatgaa cctctcgtg agatgaaaag tcaagtggaca 1350
gctgtctggg tgaatatctc ttccagttgg attggcatcg tgctgtatgt 1400
ttggacactc gtggcaccac ttgtctttac aaatcgtgat tttgactgag 1450
tgagactttc agcatgaaag tccactttg attattgctt atttgaaaac 1500
agtattocca acttttgtaa agttgtgtat gtttttgctt cccatgtaac 1550

ttctocagtg ttctggcatg aattagattt tactgcttgt cattttgtta 1600
 ttttcttacc aagtgcattg atatgtgaag tagaatgaat tgcagaggaa 1650
 agttttatga atatgggatg gagtttagtaa aagtggccat tattgggctt 1700
 attctctgct ctatagttgt gaaatgaaga gtaaaaacaa atttgtttga 1750
 ctattttaaa attatattag accttaagct gttttagcaa gcattaaagc 1800
 aaatgtatgg ctgccccttg aaatatattg tgtgttgccct ggcaggatag 1850
 tgcaagaac atggtttatt ttaaaattta taaacaagtc acttaaatgc 1900
 cagttgtctg aaaaatctta taaggtttta cccttgatac ggaatttaca 1950
 caggttagga gtgttttagtg gacaatagtg taggttatgg atggagggtg 2000
 cggtaactaa ttgaataacg agtaataat ctacttggg tagagatggc 2050
 ctttgccaac aaagtgaact gttttggttg ttttaaacct atgaagtatg 2100
 ggttcagtg aaatgtttgg aactctgaag gatttagaca aggttttgaa 2150
 aaggataatc atgggttaga aggaagtgtt ttgaaagtc ctttgaaagt 2200
 tagttttggg ccagcacgg tagctcacc ttgtaatcc cagcactttg 2250
 ggagcttaag tgggttagatt acttgagccc aggaattcag accagcttgg 2300
 cacatggtga acctgttcta taaaataat ctggctttga gcatacgct 2350
 gtggtccagc actgagaggc tagtgaagat tgcctgagcc agagccaaag 2400
 gttgcagtga gcaagtcacg toactgcact ctactggca cagagtaagc 2450
 caaaaaata tatatatatt gaaatcaagg aggcataatt ttgacaggga 2500
 aggaagtaac tgcaaaaoca ctaggcttta gtaggtaact atataaaatc 2550
 tagtccagtt ctctcattta aaaaaatgaa gacactgaaa tacagactta 2600
 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagc 2650
 tctctctgac atttaaaaat aatttctatt caaaatacat gcataattgat 2700
 ttacacctca tactgtgata attaatgtga tgtggattgc tgggttcag 2750
 catgacctca aaacagggtca gaagaatgat ggaatgttt agaataaact 2800
 cctgcttata gtatactaca cagttcaaaa gatgtttaaa atgcttttgt 2850
 atttactgcc atgtaattga aatatataga ttattgtaac ctttcaacct 2900
 gaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950
 taatgaagct tttaaaatct acaatttctt ctttaaaaa atttattaat 3000
 gtgaatgga tataacaatt cagcttaatt ccccaacctt attctgtgtg 3050
 tagacattgt attccacaat ttggaatggc tgtgttttct ctctaaataa 3100
 atgaattcag agaaaaaaa aaaaaa 3127

<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73
 Met Gly Ser Val Leu Gly Leu Cys Ser Met Ala Ser Trp Ile Pro
 1 5 10 15
 Cys Leu Cys Gly Ser Ala Pro Cys Leu Leu Cys Arg Cys Cys Pro
 20 25 30
 Ser Gly Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala Leu Phe
 35 40 45
 Leu Leu Val Gly Val Cys Val Ala Cys Val Met Leu Ile Pro Gly
 50 55 60
 Met Glu Glu Gln Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu
 65 70 75
 Lys Gly Val Val Pro Cys Asn Ile Leu Val Gly Tyr Lys Ala Val
 80 85 90
 Tyr Arg Leu Cys Phe Gly Leu Ala Met Phe Tyr Leu Leu Leu Ser
 95 100 105
 Leu Leu Met Ile Lys Val Lys Ser Ser Ser Asp Pro Arg Ala Ala
 110 115 120
 Val His Asn Gly Phe Trp Phe Phe Lys Phe Ala Ala Ala Ile Ala
 125 130 135
 Ile Ile Ile Gly Ala Phe Phe Ile Pro Glu Gly Thr Phe Thr Thr
 140 145 150
 Val Trp Phe Tyr Val Gly Met Ala Gly Ala Phe Cys Phe Ile Leu
 155 160 165
 Ile Gln Leu Val Leu Leu Ile Asp Phe Ala His Ser Trp Asn Glu
 170 175 180
 Ser Trp Val Glu Lys Met Glu Glu Gly Asn Ser Arg Cys Trp Tyr
 185 190 195
 Ala Ala Leu Leu Ser Ala Thr Ala Leu Asn Tyr Leu Leu Ser Leu
 200 205 210
 Val Ala Ile Val Leu Phe Phe Val Tyr Tyr Thr His Pro Ala Ser
 215 220 225
 Cys Ser Glu Asn Lys Ala Phe Ile Ser Val Asn Met Leu Leu Cys
 230 235 240
 Val Gly Ala Ser Val Met Ser Ile Leu Pro Lys Ile Gln Glu Ser
 245 250 255
 Gln Pro Arg Ser Gly Leu Leu Gln Ser Ser Val Ile Thr Val Tyr
 260 265 270
 Thr Met Tyr Leu Thr Trp Ser Ala Met Thr Asn Glu Pro Glu Thr
 275 280 285

Asn Cys Asn Pro Ser Leu Leu Ser Ile Ile Gly Tyr Asn Thr Thr
 290 295 300
 Ser Thr Val Pro Lys Glu Gly Gln Ser Val Gln Trp Trp His Ala
 305 310 315
 Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr
 320 325 330
 Ser Ser Ile Arg Thr Ser Asn Asn Ser Gln Val Asn Lys Leu Thr
 335 340 345
 Leu Thr Ser Asp Glu Ser Thr Leu Ile Glu Asp Gly Gly Ala Arg
 350 355 360
 Ser Asp Gly Ser Leu Glu Asp Gly Asp Val His Arg Ala Val
 365 370 375
 Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His
 380 385 390
 Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr
 395 400 405
 Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp
 410 415 420
 Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val
 425 430 435
 Leu Tyr Val Trp Thr Leu Val Ala Pro Leu Val Leu Thr Asn Arg
 440 445 450
 Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
 gcgagaaaga agctgtctcc atctgtctg tateccgctg cttcttgnga 50
 cggtgtggag atggggagcg tcccggggc tgtgctccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgcccgtgt ttgctatgcc gatgtgtgcc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaa gtgttgtccc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgttt tgcttttggt 350
 tggctatgtt ctatctctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgato ctagagctgc agtgcacaat ggatttttgg tcttttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150
tttnttgctt gttggagtan gtgtagcttg tgtaattgtg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaggt 250
gttgtccctt gtaacatttt gggtggctat aaagctgtat atngtttgtg 300
ctttggtttg gctangttct atnttcttct ctctttaacta atgatcaaag 350
tgaagagtag cagtgtcctt agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatgggga gogtccttgg ggttgtgctc catggcgagc tggataccat 100
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgctg tctagtgtga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcctgttgg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aagggtgttg cccttgtaac 300
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtctat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagt 400
atcctagagc tgcagtgac aatggatttt gggtctttaa atttgctgca 450
gcaattgcaa ttattattgg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
gctgtccctta gtggaacaa ntccaacttg taacttgat tgatctatgc 50
actttttcct tgccttgttg agtatgtgta gotttgtgta atgttgttcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtgtt gtcccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttggtttgg ctatgttcta tcttcttcto tctttactaa 250
tgatcaaatg gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttgttct ttaaatgtgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcattg 400
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtggggtgaa aaaatggaag aagggaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgttttgtt ggaagtgccc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccaactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgtcg tcctagtggg aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
ctcggggcgcg cacaggcagc tcgggttgcc ctgcgattga gctgcgggtc 50
gcgccgcggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggagagtc 150
ctgtgaaagc agataaaaga aaacatttat taactgtgca ttacgagggg 200
agcgcgccgcg cggggctgtc gcaactcccg cggaacattt ggctccctcc 250
agctcccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
tttccagcca agtggacctg atcgatggcc ctctgaatt tatcacgata 350
tttgatttat tagcgatgcc ccctgggttg tgtgttacgc acacacagct 400
gcacacaagg ctctggctcg ctccctcccc tcgtttccag ctctcgggag 450
aatcccacat ctgtttcaac tctccgcga gggcgagcag gagcgagagt 500
gtgtcgaaat tcgcagtgaa gagggagcag gaaaaagaaa caaagccaca 550
gacgcaactt gagactcccg catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggcccccca gctcgtgct gtgcttgctg tccgcaactg 650
 tgttctccct gctgggtgga agctcggcct tctgtgcga ccaccgctg 700
 aaaggcagggt ttcagaggga ccgcaggaac atccgcccc aatcatcct 750
 ggtgctgacg gacgaccagg atgtggagct gggttccatg cagggtgatga 800
 acaagaccgg gcgcatcatg gagcagggcg gggcgcaact catcaacgcc 850
 ttctgtacca caccatgtg ctgcccctca cgctcctcca tctcactgg 900
 caagtacgtc cacaaccaca acacctacac caacaatgag aactgtctct 950
 cgccctcctg gcaggcacag cacgagagcc gcacctttgc cgtgtacctc 1000
 aatagcactg gctaccggac agctttcttc ggaagtatc ttaatgaata 1050
 caacggctcc tacgtgccac ccggctggaa ggagtgggtc ggactcctta 1100
 aaaactccg cttttataac tacacgctgt gtcggaacgg ggtgaaagag 1150
 aagcacggct ccgactactc caaggattac ctacagacc tcatacca 1200
 tgacagcgtg agcttcttcc gcacgtccaa gaagatgtac ccgcacaggc 1250
 cagtcctcat ggtcatcagc catgcagccc ccacggccc tgaggattca 1300
 gcccacaat attcacgct cttcccaaac gcatctcagc acatcacgcc 1350
 gagctacaac tacgcgccca acccggaaca aactggatc atgcgtaca 1400
 cggggcccat gaagcccatc cacatggaat tcaccaaat gctccagcg 1450
 aagcgcttc agacctcat gtcggtggac gactccatgg agacgattta 1500
 caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtataca 1550
 ccgccgacca cggttaccac atcggccagt ttggcctggt gaaagggaaa 1600
 tccatgccat atgagtttga catcagggtc ccgttctacg tgaggggccc 1650
 caacgtggaa gcgggtgtc tgaatcccca catcgtcctc aacattgacc 1700
 tggccccac catcctggac attgcaggcc tggacatacc tgcggatatg 1750
 gacgggaaat ccatcctcaa gctgctggac acggagcggc cgggtaatcg 1800
 gtttactctg aaaaagaaga tgagggtctg gcgggactcc tcttgggtgg 1850
 agagaggcaa gctgctacac aagagagaca atgacaaggt ggagccccc 1900
 gaggagaact ttctgccaa gtaccagcgt gtgaaggacc tgtgtacag 1950
 tgctgagtac cagacggcgt gtgagcagct gggacagaag tggcagtggt 2000
 tggaggacgc caccgggaag ctgaagctgc ataagtcaa gggccccatg 2050
 cggctggcg gcagcagagc cctctccaac ctctgtccca agtactacgg 2100
 gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc 2150
 tggccggacg ccggaaaaaa ctctcaaga agaagtacaa gccagctat 2200

gtccgcagtc gctccatccg ctacgtggcc atcgaggtgg acggcagggt 2250
gtaccacgta ggcctgggtg atgccgccca gccccgaac ctccaccaagc 2300
ggcactggcc agggggcccct gaggaaccaag atgacaagga tgggtggggac 2350
ttcagtgcca ctggaggcct tcccgactac tcagccgccca accccattaa 2400
agtacacat cgggtgtaca tcttagagaa cgacacagtc cagtgtgacc 2450
tggacctgta caagtccctg caggcctgga aagaccacaa gctgcacatc 2500
gaccacgaga ttgaaccct gcagaacaaa attaagaacc tgagggaagt 2550
ccgagggtcac ctgaagaaaa agcggccaga agaattgtac tgtcacaaaa 2600
tcagctacca caccagcac aaaggccgcc tcaagcacag aggtccagtc 2650
ctgcctcctt tcaggaaggg cctgcaagag aaggacaagg tgtggtgttt 2700
gcgggagcag aagcgcaaga agaaactccg caagctgtgc aagcgctgc 2750
agaacaacga cacgtgcagc atgccaggcc tcacgtgctt caccacgac 2800
aaccagcact ggcagacggc gcctttcttg acactggggc ctttctgtgc 2850
ctgcaccagc gccacaata acacgtactg gtgcatgagg accatcaatg 2900
agactacaaa tttcctcttc tgtgaatttg caactggctt cctagagtac 2950
tttgatctca acacagacc ctaccagctg atgaatgcag tgaacacact 3000
ggacagggat gtctcaacc agctacacgt acagctcatg gagctgagga 3050
gctgcaaggg ttacaagcag tgtaaccccc ggactcgaaa catggacctg 3100
gatggaggaa gctatgagca atacaggcag tttcagcgtc gaaagtggcc 3150
agaaatgaag agacttctt ccaaatcact gggacaactg tgggaaggct 3200
gggaaggtta agaaacaaca gaggtggacc tccaaaaaca tagaggcatc 3250
acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc 3300
tgtgtattg gccaggaggc ctgagaaaag aagcacgcac tctcagtcac 3350
catgacagat tctggaggat aaccagcagg agcagagata acttcaggaa 3400
gtccattttt gcccctgctt ttgctttgga ttatacctca ccagctgcac 3450
aaaatgcatt tttctgtatc aaaaagtcac cactaaacct cccocagaag 3500
ctcacaaaag aaacgggaga gagcgagcga gagagatttc cttggaattt 3550
tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaaagca 3600
gtcctgttct aaatcctctt attcttttgg tttgtcacia agaaggaact 3650
aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700
tttgacaatg agtcagtagc acaaaagaga tgacatttac ctagcactat 3750
aaaccctggt tgctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val
 1 5 10 15
 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro
				260					265					270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln
				275					280					285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met
				290					295					300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr
				305					310					315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly
				320					325					330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val
				335					340					345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val
				350					355					360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu
				365					370					375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu
				380					385					390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met
				395					400					405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu
				410					415					420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe
				425					430					435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu
				440					445					450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val
				455					460					465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro
				470					475					480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys
				485					490					495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp
				500					505					510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys
				515					520					525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val
				530					535					540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp
				545					550					555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala
				560					565					570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr
				575					580					585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr
				590					595					600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu
				605					610					615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His
				620					625					630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu
				635					640					645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys
				650					655					660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu
				665					670					675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln
				680					685					690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys
				695					700					705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys
				710					715					720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp
				725					730					735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr
				740					745					750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu
				755					760					765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu
				770					775					780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val
				785					790					795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu
				800					805					810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg
				815					820					825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg
				830					835					840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser
				845					850					855
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly			
				860					865					

<210> 85
 <211> 19
 <212> DNA

<213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 85
 gaagccggct gtctgaatc 19
 <210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 86
 ggccagctat ctccgag 18
 <210> 87
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 87
 aagggcctgc aagagaag 18
 <210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 88
 cactgggaca actgtggg 18
 <210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 90
 aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctgggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcggccgggtg aatcggtttc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
aacaaagtgc agtgactgag agggctgagc ggaggctgct gaaggggaga 50
aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150
gtggcgcttc tgctgctgct gctgctgctg gccacctgcc ttttccacgg 200
acggcaggag tgtgacgtgg agaggaaccg tacagctgca gggggaaaacc 250
gagtccgcgg ggcccagcct tggcccttcc ggcgccgggg ccacctggga 300
atcttttcacc atcacgtca tcttgccac gtatctcatg tgcgaatgt 350
gggcctccac caccaccacc acccccgcca caccctcac cacctccacc 400
accaccacca cccccaccgc caccatcccc gccacgctcg ctgaggctgc 450
tgtgcggctg gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctggggg 550
gaacgagggg aacaatagac tggggcttgc tccagctgca tttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgtgtaagg gtttggggag tggagagcaa ggtgtgctct tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctctcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtcccttttg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatgc gtgccttagt ccaagaaaaa aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
 ggcggctgct gagctgcctt gaggtgcagt gttggggatc cacagccatg 50
 tcggacctgc tactactggg cctgattggg ggcctgactc tcttactgct 100
 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgaagtgc tgggtcacc ccatccgca acgtcactgt ggcctacaag 200
 ttccacatgg ggtctatagg tgagactggg cggtctttca ctgagagctg 250
 cagcatctct cccaagctcc gctccatgc tgtctactat gacaaccccc 300

acatggtgcc ccoctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccoctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgttctcct tcccggcacc cagccatgtg gtgacagcca 450
 ccttccccta caccaccatt ctgtccatct ggctggctac ccgcctgtgc 500
 catcctgcct tggacaccta catcaaggag cggaagctgt gtgcctatcc 550
 tcggctggag atctaccagg aagaccagat ccatttccatg tgcccactgg 600
 caccggcagg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccggggagac ttcagctgcc acactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcagggtc 850
 cagcggctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900
 gggagtcacg gctggacctt gggactgagc ccoctggggc taccaagtgg 950
 ctctgggagc ccactgcccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctcctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctctc ttcctctggg ggaggagggg ttcctgaggg 1100
 acctgacttc cctgtctcca ggccctctgc taagccttct cctcactgcc 1150
 ctttaggctc ccagggccag aggagccagg gactattttc tgcaccagcc 1200
 cccagggctg ccgccccctg tgtgtctttt ttccagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Ser Asp Leu Leu Leu Gly Leu Ile Gly Gly Leu Thr Leu 15
 1 5 10
 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu 30
 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn 45
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr 60
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg 75
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
 290 295 300
 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
 305 310

<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

ccgcgggaac gctgtcctgg ctgccgccac ccgaacagcc tgctcctggtg 50
 ccccggtcc ctgccccgcy ccagtcattg accctgcgcc cctcactcct 100
 cccgctocat ctgctgctgc tgctgctgct cagtgcggcg gtgtgccggg 150
 ctgaggctgg gctcgaaacc gaaagtcccg tccggaccct ccaagtggag 200
 accctggtgg agccccaga accatgtgcc gagcccgtg cttttggaga 250

cacgcttcac ataacactaca cgggaagcgtt ggtagatgga cgtattattg 300
 acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350
 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
 gcgaagggca atcattcctt ctacttggc ctatggaaaa cggggatttc 450
 caccatctgt cccagcggat gcagtggtgc agtatgacgt ggagctgatt 500
 gcaactaatcc gagccaacta ctggctaagc ctggtaagg gcattttgcc 550
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
 acctatacag aaaggccaat agaccaaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu
 20 25 30
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

<400> 100
cccgggaacg tgttcctggc tgccgcaccc gaacagcctg tcttggtgcc 50
ccggtccctt gcccgcgccc cagtcacgac cctgcgcccc tcactccctcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaccga aagtcccgtc cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgccga gcccgctgct ttggagaca 250
cgcttcacat aactacacg ggaagcttgg tagatggagc tattattgac 300
acctccctga ccagagaccc tctggttata gaacttggcc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtgggtcag tatgacgtgg agctgattgc 500
actaatccga gcoactact ggctaaagct ggtgaaggcg attttgcctc 550
tggtagggat ggccatggtg ccacctcct gggcctcatt gggatcaccc 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
ccgaaagtcc cgtccggacc ctccaagtgg agaccctggt ggagccccca 50
gaaccatgtg ccgagcccg cgtcttttga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
acctctggtt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcacttg gctatggaa aacggggatt tccaccatct gtcccagcgg 300
atgcagtggt gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctcttgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaacaag 500
 agcaaaaaga aataataaat aataaatattt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
 ctgctgcac cgggtgtctg gaggtgtggt ccgttttgtt ttcttggcta 50
 aaatcggggg agtgaggcgg gccggcgogg cgcgacacgg ggctccggaa 100
 ccaatgcacg acggggcttg actgacctga aaaaaatgtc tggattttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgaatac 200
 tattgtctcc attgtctgtg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatccacca tgaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatogaat ggacaagtcc gaggtgatag ttacagttaa ggttgcctgg 400
 gtcaaacagg tgctcgattt tggcttttcg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattcct tttggagggt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600
 tggcagtgaa cacatctgat ttcccacagc acaacagccc tgcattgggtt 650
 tgtttgtttt ttaactgctc actcccaacc ttttgaatg ccattttcta 700
 aacttatttc tgagtgtagt ctcagcttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctaaacacaa accaaaaatc tattgtggtt tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaattac aaaagaattt 900
 atggatttgt caatgtaagt atttgcata tctgagggtc aaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtctcttctg 1000
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaaatttcc 1050
 gtggtcaaaa ttcttctca ctataatttg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttt aggggtctcc aagggtgtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tcagccacc aggtccctg 1200
 tgtcccttc atgggaagggt ctcccgctgt gcctctcatt ccaaggcgag 1250
 gaagatgtga ctcagccatg acacgtgggt ctggtgggat gcacagtcac 1300

tccacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Gly Phe Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp
1 5 10 15

Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30

Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45

Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60

Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75

Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90

Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105

Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120

Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135

Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150

Arg Thr Glu Asp Leu Trp Gln
155

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

ttcttggtcta aaatcggggg agtgaggcgg gcgggcgcgg cgcgacaccg 50

ggctccggaa ccactgcacg acggggctgg actgacctga aaaaaatgtc 100

tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150

agcgaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200

tggtggatta tcatagatgc agctgttatt tatccacca tgaagattt 250

caaccactca taccatgcct gtggtgttat agcaaccata gcttctctaa 300

tgattaatgc agtatogaat ggacaagtcc gaggtgatag ttacagttaa 350

ggttgtctgg gtcaaacagg tgctgcatt tgggttttct ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattcct tttggagggt 450
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
 cagaatgcct tcattctttt tggagggtg gttttaagt ttgc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
 tggacggacc tgaaaaaat gtttggattt ntagaggnt tgagatgttc 50
 agaatgcatt actgggggaa aagcgcaaat actattgctt ccattgctgc 100
 tgggtgnta ttttttacag gctgttggtat tatcatagat gcagntgtta 150
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
 ccgagggtat agttacagtg aaggttgttt gggcaaaaca ggtgctcgca 300
 tttggctttt cgttggtttc atgttggtcct ttggatctct gattgcatct 350
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
 ggacacggg ttccggacca atgcangacg ggggtggantg acctgaaaaa 50
 aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100
 ggaaaagcgc aatantattg ctttccattg ctgctgggtg actatttttt 150
 acagggtggt ggattatcat agatgcagct gttatttate ccaccatgaa 200
 agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250
 tcctaattgat taatgcagta tcgaatggac aagtcgagg tgatagttaa 300
 agtgaagggt gtttgggtca aacagggtgt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgag gattcttctt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattncnt 450
atttttccag aatgcc 466

<210> 107
<211> 377
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356
<223> unknown base

<400> 107
tagagggcctt gagatgctca gaatgcattg actgggggga aaagcgcaat 50
antattgctt ccattgntgn tgggtgnta tttttttaca ggctgggtgga 100
ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150
tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200
tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggtgtgt 250
tgggtcaaac aggtgntngc atttggttt tngttggttt catgttggtcc 300
tttgatctn tgattgcatt tatgtggatt ntttttgagg gttatgttgc 350
taaaagnaaaa gacatagtat accctgt 377

<210> 108
<211> 552
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 12, 25, 65, 130, 437, 537
<223> unknown base

<400> 108
gggaggctgt gnccgttttg tttntttggc taaaatcggg ggagtggagg 50
ggcccgcgcc ggcnngaac cgggttcogg gaaccattgc acgacggggt 100
ggactgacct gaaaaaaatg ttgggatttn tagagggcct gagatgctca 150
gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200
tgggtgacta ttttttacag gctggtggat tatcatagat gcagctgtta 250
tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300
atagcaacca tagccttcct aatgattaat gcagtatoga atggacaagt 350
ccgaggtgat agttacagt aaggttgtct ggggtcaaca ggtgctcgca 400
tttggtttt cgttggttct atgttggtct ttggaatnct gattgcattc 450
atgtggatto tttttggagg ttatgttgc aaagaaaaag acatagtata 500
ccttgaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

ctcaaggaga agtttccaca ggaggaagct atcattgaca agtatataaa 600
 gctgtgtaag gtggtatcca gtggagcccc tcatgccatc ctgttgaaat 650
 tctctccatt gcccgtaggt cagctcctcg acaggtgtgg gctgctgact 700
 cgtttctctc cattccttca agcatccacc cagagcctgg ctgaggtcct 750
 gcagcagctg ggggcctcct ctgagctcca ggcagtactc agctacatct 800
 tccccactta cgggtgcacc cccaaccaca gtgccttttc catgcacgcc 850
 ctgctgtgtca accactacat gaaaggaggc ttttatcccc gaggggggtc 900
 cagtgaaatt gccttcaca ccatccctgt gattcagcgg gctggggcgg 950
 ctgtcctcac aaaggccaact gtgcagagtg tgttgctgga ctcagctggg 1000
 aaagcctgtg gtgtcagtg gtgaaggagg catgagctgg tgaacatcta 1050
 ttgccccatc gtggtctoca acgcaggact gttcaacacc tatgaacacc 1100
 tactgcccgg gaacgccgc tgccctgccag gtgtgaagca gcaactgggg 1150
 acgggtgcgc ccggcttagg catgacctct gttttcatct gcctgcgagg 1200
 caaccaaggaa gacctgcac tgccgtccac caactactat gtttactatg 1250
 acacggacat ggaccaggcg atggagcgct acgtctocat gccacgggaa 1300
 gaggtgcggg aacacatccc tcttctcttc ttcgcttttc catcacgcaa 1350
 agatcogacc tgggaggacc gattcccagg ccggtccacc atgatcatgc 1400
 tcatacccac tgctacgag tggtttgagg agtggcaggc ggagctgaag 1450
 ggaaagcggg gcagtgacta tgagacctc aaaaactcct ttgtggaagc 1500
 ctctatgtca gtggtcctga aactgttccc acagctggaag gggaagggtg 1550
 agagtgtgac tgcaggatcc ccactcacca accagtctta tctggctgct 1600
 ccccgagggt cctgctacgg ggctgacct gacctgggcc gctgcaccc 1650
 ttgtgtgatg gcctccttga gggcccagag ccccatcccc aacctctatc 1700
 tgacaggcca ggatatcttc acctgtggac tggtcggggc cctgcaaggt 1750
 gcctgtctgt gcagcagcg catcctgaag cggaacttgt actcagacct 1800
 taagaatctt gattctagga tccgggcaca gaagaaaaag aattagtctc 1850
 atcaggggag agtcagagga atttgcccc tggtctgggg atctcccttg 1900
 acttaccatc aatgtcttct tgcattagtt ccttgcacgt ataaagcact 1950
 ctaatttggt totgatgcct gaagagaggc ctagtttaaa tcaacaattcc 2000
 gaatctgggg caatggaatc actgcttcca gctggggcag gtgagatctt 2050
 tacgcctttt ataacatgcc atcccacta ataggatatt gacttgata 2100
 gcttgatgtc tcatgacgag cggcgctctg catccctcac coactgcctc 2150

taactcagtg atcaaagcga atattccatc tgtggataga acccotggca 2200
 gtgtgtgcag ctcaacctgg tgggttcagt tctgtcctga ggcttctgct 2250
 ctcattcatt tagtgctacg ctgcacagtt ctacactgtc aagggaaaag 2300
 ggagactaat gaggcttaac tcaaaacctg ggcgtggttt tggttgccat 2350
 tccataggtt tggagagcto tagatctctt ttgtgctggg ttcagtggct 2400
 cttcagggga caggaaatgc ctgtgtctgg ccagtgtggt tctggagctt 2450
 tggggtaaca gcaggatcca tcagttagta ggggtcatgt catgatgaca 2500
 tatccaatcc atatggaagt cccgggtctg tcttcttat catcgggggtg 2550
 gcagctgggt ctcaatgtgc cagcagggac tcagtacctg agcctcaatc 2600
 aagccttacc caccaaatac acagggaagg gtgatgcagg gaagggtgac 2650
 atcaggagtc agggcatgga ctggttaagt gaatactttg ctgggctgaa 2700
 gcagcgctga gggcattcca gccaaaggga cagcagggga cagtgcaggg 2750
 aggtgtgggg taaggagggg aagtcacatc agaaaaggga aagccacgga 2800
 atgtgtgtga agcccagaaa tggcatttgc agttaattag cacatgtgag 2850
 ggtagacag gtagggtaat gcaagctcaa ggtttggaaa aatgactttt 2900
 cagttatgtc ttgtgtatca gacatacgaa aggtctcttt gtagtctgtg 2950
 ttaatgtaac attaataaat ttattgattc cattgcttta aaaaaaaaaa 3000
 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
 Met Trp Leu Pro Leu Val Leu Leu Leu Ala Val Leu Leu Leu Ala
 1 5 10 15
 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys His Thr Phe Gly Lys Asn Gly Leu Glu Phe Asp Thr Gly Ile	110	115	120
His Tyr Ile Gly Arg Met Glu Glu Gly Ser Ile Gly Arg Phe Ile	125	130	135
Leu Asp Gln Ile Thr Glu Gly Gln Leu Asp Trp Ala Pro Leu Ser	140	145	150
Ser Pro Phe Asp Ile Met Val Leu Glu Gly Pro Asn Gly Arg Lys	155	160	165
Glu Tyr Pro Met Tyr Ser Gly Glu Lys Ala Tyr Ile Gln Gly Leu	170	175	180
Lys Glu Lys Phe Pro Gln Glu Glu Ala Ile Ile Asp Lys Tyr Ile	185	190	195
Lys Leu Val Lys Val Val Ser Ser Gly Ala Pro His Ala Ile Leu	200	205	210
Leu Lys Phe Leu Pro Leu Pro Val Val Gln Leu Leu Asp Arg Cys	215	220	225
Gly Leu Leu Thr Arg Phe Ser Pro Phe Leu Gln Ala Ser Thr Gln	230	235	240
Ser Leu Ala Glu Val Leu Gln Gln Leu Gly Ala Ser Ser Glu Leu	245	250	255
Gln Ala Val Leu Ser Tyr Ile Phe Pro Thr Tyr Gly Val Thr Pro	260	265	270
Asn His Ser Ala Phe Ser Met His Ala Leu Leu Val Asn His Tyr	275	280	285
Met Lys Gly Gly Phe Tyr Pro Arg Gly Gly Ser Ser Glu Ile Ala	290	295	300
Phe His Thr Ile Pro Val Ile Gln Arg Ala Gly Gly Ala Val Leu	305	310	315
Thr Lys Ala Thr Val Gln Ser Val Leu Leu Asp Ser Ala Gly Lys	320	325	330
Ala Cys Gly Val Ser Val Lys Lys Gly His Glu Leu Val Asn Ile	335	340	345
Tyr Cys Pro Ile Val Val Ser Asn Ala Gly Leu Phe Asn Thr Tyr	350	355	360
Glu His Leu Leu Pro Gly Asn Ala Arg Cys Leu Pro Gly Val Lys	365	370	375
Gln Gln Leu Gly Thr Val Arg Pro Gly Leu Gly Met Thr Ser Val	380	385	390
Phe Ile Cys Leu Arg Gly Thr Lys Glu Asp Leu His Leu Pro Ser	395	400	405
Thr Asn Tyr Tyr Val Tyr Tyr Asp Thr Asp Met Asp Gln Ala Met	410	415	420

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
 tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
 tacaacctat gactacaaag cagatgaaaa gtggggcttt tgtgaaactg 600
 aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
 caaactggaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaag 700
 agaagcatat cggatatctc aaaaggcagc aagcatgaac cataccaaaag 750
 ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800
 aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
 tcccaaggga cagactgctc ttggctttct gtatgcctct ggacttgggtg 900
 ttaattcaag tcaggcaaag gctcttgtat attatacatt tggagctctt 950
 gggggcaatc taatagccca catggttttg gtaagtagac tttagtggaa 1000
 ggctaataat attaacaatc gaagaatttg tggtttatag cggccacaac 1050
 ttttcagct ttcgatgacc agatttgctt gtattaaagc caaatattca 1100
 gttgaacttc cttcaaattc ttgttaatgg atataacaca tggaaatctac 1150
 atgtaaatga aagttgggtg agtcacaaat tttcttttaa aatgattagt 1200
 ttggctgatt gccctaaaa agagagatct gataaatggc tctttttaaa 1250
 ttttctcga gttggaattg tcagaatcat tttttacatt agattatcat 1300
 aattttaaaa atttttcttt agtttttcaa aattttgtaa atggtggcta 1350
 tagaaaaaca acatgaaata ttatacaata ttttgaaca atgccctaag 1400
 aattgttaaa attcatggag ttatttgtgc agaatactc cagagagctc 1450
 tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
 gtcatttatt gctagtgcac ctgtgcctgc ttccagtagt ctcattttcc 1550
 ctattttgct aatttgttac tttttctttg ctaatttgga agattaactc 1600
 atttttaata aaattatgtc taagattaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700

a 1701

<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

Met	Arg	Val	Arg	Ile	Gly	Leu	Thr	Leu	Leu	Leu	Cys	Ala	Val	Leu
1				5				10						15
Leu	Ser	Leu	Ala	Ser	Ala	Ser	Ser	Asp	Glu	Glu	Gly	Ser	Gln	Asp
				20					25					30

ctgccagcc ctgtgcccc aagcacctgg agcatatagc ctgcagaac 50
 ttctacttgc ctgcctccct gcctctggcc atggcctgcc ggtgcctcag 100
 ctctcttctg atggggacgt tctgtcagt ttcccagaca gtcttgcccc 150
 agctggatgc actgctggtc ttcccagccc aagtgggtca actctcctgc 200
 acgctcagcc ccagcacgt caccatcagg gactacgggt tgtctcggtg 250
 ccagcagcgg gcaggcagtg cccctcgata tctcctctac taccgctcgg 300
 aggaggatca ccacggcct gctgacatcc ccgatogatt ctggcagcc 350
 aaggatgagg ccacaaatgc ctgtgtcttc accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggtacggc ttagtcctc 450
 aggggtgggg tgtgagatgg gtgcctcccc ctgcctccc atttctgccc 500
 ctgacottgg gtccttttta aactttctct gaggcttctg tccctctgt 550
 aaaatgggtt aataatatto aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
 Met Ala Cys Arg Cys Leu Ser Phe Leu Leu Met Gly Thr Phe Leu
 1 5 10 15
 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

gccgccccgc ccgagaccg ggcccggggg cgcggggcgg cgggatgcgg 50
 cgccccgggg ggcgatgacc gcggagcgca cgcccggggc ccggccctga 100
 ccccgccgcc cgcccgctga gccccccgcc gaggtccgga caggccgaga 150
 tgacgccgag cccctgttg ctgctctgc tgcgcgcgt gctgtgggg 200
 gccttccacc cggcgccgc cgcccgaggc ccccaaaga tggcggacaa 250
 ggtggtccca cggcaggtgg ccggctggg ccgactgtg cggctgcagt 300
 gccagtga gggggaccgc ccgcgcctga ccatgtggac caagatggc 350
 cgcaccatcc acagcggtg gagccgttc cgcgtgctgc cgcaggggct 400
 gaaggtgaag caggtggagc gggaggtgc cggcgtgtac gtgtcaagg 450
 ccaccaacgc cttcggcagc ctgagcgtca actacacct cgtcgtgctg 500
 gatgacatta gcccaggaa ggagagcctg gggcccgaca gtcctcttg 550
 ggtcaagag gaccccgcca gccagcagtg ggcacgaccg cgcttcacac 600
 agccctccaa gatgaggcgc cgggtgatcg caccggccgt ggtagctcc 650
 gtgcggctca agtgcgtggc cagcgggcac cctcgcccg acatcacgtg 700
 gatgaaggac gaccaggcct tgacgcgcc agaggccgt gagccagga 750
 agaagaagt gacactgagc ctgaagaacc tgcggccgga ggacagcgc 800
 aaatacacct gccgcgtgc gaaccgcgcg ggcgccatca acgccaccta 850
 caaggtggat gtgatccag ggaaccgttc caagcccggt ctcacaggca 900
 cgcacccgt gaacacgac gtgacttcg gggggaccac gtccttcag 950
 tgcaaggtc gcagcgacgt gaagccggtg atccagtggc tgaagcgcgt 1000
 ggagtacgc gccgagggcc gccacaact caccatcgat gtggcgggc 1050
 agaagttgt ggtgctgcc acgggtgacg tgtggtcgcg gcccgacgc 1100
 tcctacctca ataatgtgt catcacccgt gcccgccagg acgatgcggg 1150
 catgtacatc tgccttggcg ccaacacat gggctacagc ttccgcagcg 1200
 ccttctcac cgtgctgcca gacccaaaac cgcaggggc acctgtggcc 1250
 tcctcgtcct cggccactag cctgcgcgtg ccgtggtca tcggcatccc 1300
 agccggcgct gtcttcaccc tgggcaccct gctcctgttg ctttgccagg 1350
 cccagaagaa gccgtgcacc cccgcgcctg cccctcccc gcctgggcac 1400
 cgcccgccgg ggacggcccg cgaccgcagc ggagacaagg accttcctc 1450
 gttggcgccc ctcagcgtg gccctggtg gggcgtgtg gaggagcatg 1500
 ggtctccggc agccccccag cacttactgg gcccaggccc agttgtgtgc 1550
 cctaagttgt accccaaact ctacacagac atccacacac acacacacac 1600

acactctcac acacactcac acgtggaggg caaggtccac cagcacatcc 1650
 actatcagtg ctagacggca ccgtatctgc agtgggcacg ggggggccgg 1700
 ccagacagcg agactgggag gatggaggac ggagctgcag acgaaggcag 1750
 gggacccatg gcgaggaga atggccagca cccaggcag tctgtgtgtg 1800
 aggcatagcc cctggacaca cacacacaga cacacacact acctggatgc 1850
 atgtatgcac acacatgcgc gcacacgtgc tccctgaagg cacacgtacg 1900
 cacacgcaca tgcacagata tgcgcctgg gcacacagat aagctgccc 1950
 aatgcacgca cagcgacaga gacatgccag aacatacaag gacatgctgc 2000
 ctgaacatac acacgcacac ccatgcgcag atgtgctgcc tggacacaca 2050
 cacacacacg gatatgctgt ctggacgcac acacgtgcag atatgggtatc 2100
 cggacacaca cgtgcacaga tatgtgcct ggacacacag ataatgctgc 2150
 cttgacacac acatgcacgg atattgcctg gacacacaca cacacacacg 2200
 cgtgcacaga tatgtgtct ggacacgcac acacatgcag atatgctgcc 2250
 tggacacaca cttccagaca cactgcaca ggcgcagata tgctgcctgg 2300
 acacacgcag atatgctgtc tagtcacaca cacacgcaga catgtgtcc 2350
 ggacacacac acgcatgcac agatatgctg tccggacaca cacacgcacg 2400
 cagatatgct gcctggacac acacacagat aatgctgcct caacactcac 2450
 acacgtgcag atattgcctg gacacacaca tgtgcacaga tatgtgtct 2500
 ggacatgcac acacgtgcag atatgctgtc cggatacaca cgcacgcaca 2550
 catgcagata tgctgcctgg gcacacactt cggacacac atgcacacac 2600
 aggtgcagat atgctgcctg gacacacaca cagataatgc tgccccaaca 2650
 ctcacacacg tgcagatatt gcctggacac acacatgtgc acagatatgc 2700
 tgtctggaca tgcacacacg tgcagatatg ctgtccggat acacacgcac 2750
 gcacacatgc agatatgctg cctgggcaca cacttcggca cacacatgca 2800
 cacacaggtg cagatatgct gcctggacac acgcagactg acgtgctttt 2850
 gggagggtgt gccgtgaagc ctgcagtacg tgtgccgtga ggcctcatagt 2900
 tgatgagga ctttccctgc tccaccgtca ccccccaac tctgcccgcc 2950
 tctgtccccc cctcagtcac cgctcccatc cccgcctctg tcccctggcc 3000
 ttggcggcta tttttgcac ctgccttggg tgcccaggag tcccctactg 3050
 ctgtgggctg ggggtggggg cacagcagcc ccaagcctga gaggtgag 3100
 cccatggcta gtggctcatc cccagtgcac tctcccctg acacagagaa 3150
 ggggccttgg tatattatatt taagaaatga agataatatt aataatgatg 3200

gaaggaagac tgggttgacg ggactgtggt ctctcctggg gccccggacc 3250
 cgcttggtct ttcagccatg ctgatgacca caccctgtcc aggccagaca 3300
 ccacccccca ccccaactgtc gtggtggccc cagatctctg taattttatg 3350
 tagagtttga gctgaagccc cgtatatatta atttattttg ttaaacacaa 3400
 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu
 1 5 10 15
 Leu Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys
 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Gly
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg Thr Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn
 245 250
 Thr Thr Val Asp Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val
 260 270
 Arg Ser Asp Val Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu
 275 285
 Tyr Gly Ala Glu Gly Arg His Asn Ser Thr Ile Asp Val Gly Gly
 290 295 300
 Gln Lys Phe Val Val Leu Pro Thr Gly Asp Val Trp Ser Arg Pro
 305 315
 Asp Gly Ser Tyr Leu Asn Lys Leu Leu Ile Thr Arg Ala Arg Gln
 320 325 330
 Asp Asp Ala Gly Met Tyr Ile Cys Leu Gly Ala Asn Thr Met Gly
 335 340 345
 Tyr Ser Phe Arg Ser Ala Phe Leu Thr Val Leu Pro Asp Pro Lys
 350 355 360
 Pro Pro Gly Pro Pro Val Ala Ser Ser Ser Ser Ala Thr Ser Leu
 365 370 375
 Pro Trp Pro Val Val Ile Gly Ile Pro Ala Gly Ala Val Phe Ile
 380 385 390
 Leu Gly Thr Leu Leu Leu Trp Leu Cys Gln Ala Gln Lys Lys Pro
 395 400 405
 Cys Thr Pro Ala Pro Ala Pro Pro Leu Pro Gly His Arg Pro Pro
 410 415 420
 Gly Thr Ala Arg Asp Arg Ser Gly Asp Lys Asp Leu Pro Ser Leu
 425 430 435
 Ala Ala Leu Ser Ala Gly Pro Gly Val Gly Leu Cys Glu Glu His
 440 445 450
 Gly Ser Pro Ala Ala Pro Gln His Leu Leu Gly Pro Gly Pro Val
 455 460 465
 Ala Gly Pro Lys Leu Tyr Pro Lys Leu Tyr Thr Asp Ile His Thr
 470 475 480
 His Thr His Thr His Ser His Thr His Ser His Val Glu Gly Lys
 485 490 495
 Val His Gln His Ile His Tyr Gln Cys
 500

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgccg ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

cccagctgag gagccctgct caagacacgg tcactggatc tgagaaactt 50

cccagggggac cgcattccag agtcagtgac tctgtgaagc acccacatct 100

acctcttgcc acgttccac gggettggg gaaagatggt ggggaccaag 150

gcctgggtgt tctccttct ggtcctggaa gtcacatctg tgtggggag 200

acagacgatg ctacaccagt cagtaagaag agtcagcct gggaagaaga 250

acccacgat ctttgccaag cctgccgaca ccctggagag ccctggtgag 300

tggacaacat ggttcaacat cgactacca ggcgggaagg gcgactatga 350

gcggctggac gccattcgct tctactatgg ggaccgtgta tgtgcccgtc 400

ccctgcggct agaggctcgg accactgact ggacacctgc gggcagcact 450

ggccagggtg tccatggtag tcccctgtag ggtttctggt gcctcaacag 500

ggagcagcgg cctggccaga actgctctaa ttacaccgta cgcttctctt 550

gcccaccagg atccctgcgc cgagacacag agcgcacatc gagcccatgg 600

tctccctgga gcaagtgtc agctgcctgt ggtcagactg ggtccagac 650

tcgcacacgc atttgcttgg cagagatggt gtcgctgtgc agtgaggcca 700

gcgaagaggg tcagcactgc atgggccagg actgtacagc ctgtgacctg 750

acctgcccaa tgggccagggt gaatgtgtgac tgtgatgcct gcattgtcca 800

ggacttcatg cttcatgggg ctgtctcctt tcccggagggt gcccagcct 850

caggggctgc tatctacctc ctgaccaaga cgccgaagct gctgaccag 900
acagacagtgc atgggagatt ccgaatccct ggcttctgccc ctgatggcaa 950
aagcatcctg aagatcacia aggtcaagtt tgccccatt gtactcacia 1000
tgcccaagac tagcctgaag gcagccacca tcaaggcaga gtttgtgagg 1050
gcagagactc catacatggt gatgaaccct gagacaaaag cacggagagc 1100
tgggcagagc gtgtctctgt gctgtaaggc cacagggaag cccaggccag 1150
acaagtatct ttggtatcat aatgacacat tgcctggatcc ttccctctac 1200
aagcatgaga gcaagctggt gctgaggaaa ctgcagcagc accaggctgg 1250
ggagtacttt tgcaaggccc agagtgatgc tggggctgtg aagtccaagg 1300
ttgccagct gattgtcaca gcatctgatg agactccttg caaccaggtt 1350
cctgagagct atcttatcog gctgccccat gattgctttc agaatgccac 1400
caactccttc tactatgacg tgggacgctg cctgtttaag acttgtgcag 1450
ggcagcagga taatgggatc aggtgccgtg atgctgtgca gaactgctgt 1500
ggcatctcca agacagagga aaggagagatc cagtgcagtg gctacacgct 1550
accaccaag gtggccaagg agtgacgctg ccagcgggtg acggaaactc 1600
ggagcatcgt gcggggcccgt gtcagtgcgt ctgacaatgg ggagcccatg 1650
cgctttggcc atgtgtacat ggggaacagc cgtgtaagca tgactggcta 1700
caagggaact ttcaccctcc atgtccccc ggacactgag aggctgggtg 1750
tcacatttgt ggacaggctg cagaagtttg tcaacaccac caaagtgtcta 1800
cctttcaaca agaaggggag tgccgtgttc catgaaatca agatgcttcg 1850
tcggaaaagag cccatcactt tggaaagccat ggagaccaac atcatcccc 1900
tggggggaagt ggttggtgaa gaccccatgg ctgaactgga gattccatcc 1950
aggagtttct acaggcagaa tggggagccc tacataggaa aagtgaaggc 2000
cagtgtgacc ttcttgatc cccggaatat ttccacagcc acagctgccc 2050
agactgacct gaaattcatc aatgacgaag gagacacttt cccctctogg 2100
acgtatggca tgttctctgt ggacttcaga gatgaggta cctcagagcc 2150
acttaatgct ggcaagtgaa aggtccacct tgactcgacc caggtaaga 2200
tgccagagca catatccaca gtgaaactct ggtcactcaa tccagacaca 2250
gggctgtggg aggaggaagg tgatttcaaa tttgaaaatc aaaggaggaa 2300
caaaagagaa gacagaacct tctctgtggg caacctggag attcgtgaga 2350
ggaggctctt taacctggat gttcctgaaa gcaggcgggt ctttgttaag 2400
gtgagggcct accggagtga gaggttcttg cctagtgagc agatccaggg 2450

gggtgtgato tccgtgatta acctggagcc tagaactggc ttcttgtcca 2500
 accctagggc ctggggccgc tttagacagt tgatcacagg ccccaacggg 2550
 gcoctgtgtgc ctgccttctg tgatgaccag tccoctgatg cctactctgc 2600
 ctatgtcttg gcaagcctgg ctggggagga actgeaagca gtggagtott 2650
 ctctaaatt caaccocaaat gcaattggcg tccctcagcc ctatctcaac 2700
 aagctcaact accgtcggac ggaccatgag gatccacggg ttaaaagac 2750
 agctttccag attagcatgg ccaagccaag gcccaactca gctgaggaga 2800
 gcaatgggcc catctatgcc tttagaagcc tccgggcagt tgaagaggca 2850
 ccaccacgtg cagccactt ccggtttctac cagattgagg gggatcgata 2900
 tgactacaac acagtccct tcaacgaaga tgacctatg agctggactg 2950
 aagactatct ggcatggtgg ccaagccga tggaattcag ggcoctctat 3000
 atcaaggta agattgtgg gccactggaa gtgaattgc gatcccgca 3050
 catggggggc actcatcggc ggacagtggg gaagctgtat ggaatccgag 3100
 atgtgaggag cactcgggac agggaccagc ccaatgtctc agctgcctgt 3150
 ctggagttca agtgacgtg gatgctctat gatcaggacc gtgtggaccg 3200
 caccctgggt aaggtcatcc ccagggcag ctgcctcga gccagtgtga 3250
 acccatgct gcatgagtac ctggtcaacc acttgccact tgcagtcaac 3300
 aacgacacca gtgagtacac catgtggca cccttggacc caetgggcca 3350
 caactatgac atctacactg tcactgacca ggaccctcgc acggccaagg 3400
 agatgcgct cggccggtgc tttagtgga catccgatg ctctccaga 3450
 atcatgaaga gcaatgtgg agtagccctc acctcaact gtgtagagag 3500
 gcaagtaggc cgcagagtg ccttccagta cctccaaagc accccagccc 3550
 agtccctcgc tgcaggcaact gtccaaggaa gagtgcctc gaggaggcag 3600
 cagcgagcga gcagggttg ccagcgccag ggtggagtgt tggcctctct 3650
 gagatttct agagtgtctc aacagccct gatcaactaa gttttgttgt 3700
 acttaccct ctctgcctt catttcatgt gacagccatt gtgagactga 3750
 tgcacaaact gtcacttggt taatttaagc acttctgttt tcgtgaattt 3800
 gcttgttgt ttctcatgc ctttacttac ttgtcccat gctactgatt 3850
 ggcacgtggc ccccaaatg gcaacaataa gccctttgt gaaactgttc 3900
 tttaaatgaa acacaagaaa ttggccactg gtaaaactct gcagcttcaa 3950
 ctgtaactta tttaatgcca ttaatgcaaa tatacttctt cttctttttg 4000
 catggttttg ccacctctg caatagtgat aatctgatg tgaagatcaa 4050

ataaccaata taaagcatat ttcttggcct tgctccacag gacataggca 4100
 agccttgatc atagttcata catataaatg gtggtgaaat aaagaaataa 4150
 aacacaatac ttttacttga aatgtaaata acttatttat ttctttgcta 4200
 aatttggaat totagtgcac attcaaagtt aagctattaa atatagggtg 4250
 atcatagttc ctctaccaag tctgaaaga acatctcctg gtatccacaa 4300
 ttacaccagg ttgctaactg tatttgtaca ttcccttg cattcgcttt 4350
 tgttctgtct agaaccagg tgtagccag ggcagatgtc aataaatgca 4400
 tactctgtat ttcgaaaaa 4420

<210> 124
 <211> 1184
 <212> PRT
 <213> Homo sapiens

<400> 124
 Met Val Gly Thr Lys Ala Trp Val Phe Ser Phe Leu Val Leu Glu
 1 5 10 15
 Val Thr Ser Val Leu Gly Arg Gln Thr Met Leu Thr Gln Ser Val
 20 25 30
 Arg Arg Val Gln Pro Gly Lys Lys Asn Pro Ser Ile Phe Ala Lys
 35 40 45
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe
 50 55 60
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp
 65 70 75
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu
 80 85 90
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr
 95 100 105
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu
 110 115 120
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val
 125 130 135
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg
 140 145 150
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys
 155 160 165
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu
 170 175 180
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys
 185 190 195
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly
 200 205 210

111

Phe Thr Leu His Val Pro Gln Asp Thr Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg Leu Gln Lys Phe Val Asn Thr Thr Lys Val Leu	545	550	555
Pro Phe Asn Lys Lys Gly Ser Ala Val Phe His Glu Ile Lys Met	560	565	570
Leu Arg Arg Lys Glu Pro Ile Thr Leu Glu Ala Met Glu Thr Asn	575	580	585
Ile Ile Pro Leu Gly Glu Val Val Gly Glu Asp Pro Met Ala Glu	590	595	600
Leu Glu Ile Pro Ser Arg Ser Phe Tyr Arg Gln Asn Gly Glu Pro	605	610	615
Tyr Ile Gly Lys Val Lys Ala Ser Val Thr Phe Leu Asp Pro Arg	620	625	630
Asn Ile Ser Thr Ala Thr Ala Ala Gln Thr Asp Leu Asn Phe Ile	635	640	645
Asn Asp Glu Gly Asp Thr Phe Pro Leu Arg Thr Tyr Gly Met Phe	650	655	660
Ser Val Asp Phe Arg Asp Glu Val Thr Ser Glu Pro Leu Asn Ala	665	670	675
Gly Lys Val Lys Val His Leu Asp Ser Thr Gln Val Lys Met Pro	680	685	690
Glu His Ile Ser Thr Val Lys Leu Trp Ser Leu Asn Pro Asp Thr	695	700	705
Gly Leu Trp Glu Glu Glu Gly Asp Phe Lys Phe Glu Asn Gln Arg	710	715	720
Arg Asn Lys Arg Glu Asp Arg Thr Phe Leu Val Gly Asn Leu Glu	725	730	735
Ile Arg Glu Arg Arg Leu Phe Asn Leu Asp Val Pro Glu Ser Arg	740	745	750
Arg Cys Phe Val Lys Val Arg Ala Tyr Arg Ser Glu Arg Phe Leu	755	760	765
Pro Ser Glu Gln Ile Gln Gly Val Val Ile Ser Val Ile Asn Leu	770	775	780
Glu Pro Arg Thr Gly Phe Leu Ser Asn Pro Arg Ala Trp Gly Arg	785	790	795
Phe Asp Ser Val Ile Thr Gly Pro Asn Gly Ala Cys Val Pro Ala	800	805	810
Phe Cys Asp Asp Gln Ser Pro Asp Ala Tyr Ser Ala Tyr Val Leu	815	820	825
Ala Ser Leu Ala Gly Glu Glu Leu Gln Ala Val Glu Ser Ser Pro	830	835	840

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

ctggtgcctc aacagggagc ag 22

<210> 126

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ccattgtgca ggtcagggtca cag 23

<210> 127

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

ctggagcaag tgctcagctg cctgtggtca gactgggggtc 40

<210> 128

<211> 2619

<212> DNA

<213> Homo sapiens

<400> 128

ctgcaagttg ttaacgctta acacacaagt atgttaggct tccaccaaag 50

ttctcaatat acctgaatac gcacaatatc ttaactcttc atatttgggt 100

ttgggatctg ctttgaggtc ccatcttcat ttaaaaaaa atacagagac 150

ctacctacc gtacgcatac atacatatgt gtatatatat gtaaactaga 200

caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250

acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300

ttgggtttac gtgtcctoag tgatgcagcc ctaccctttg gtttggggac 350

attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtttgg 400

gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaactc gatcctccg atattacctg tggagacct cctgagacgt 500
 tctgtgcaat gggcaatccc tacatgtgca ataatgagtg tgatgagcgt 550
 acccctgagc tggcacaccc cctgagctg atgtttgatt ttgaaggag 600
 acatccctcc acattttggc agtctgccac ttggaaggag tatcccaagc 650
 ctctccagtg taacatcact ctgtcttggg gcaaaacct tgagctaaca 700
 gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctgattatg gacgaacatg gcagccctat cagtattatg 800
 ccacagactg cttagatgct ttccacatgg atcctaatac cgtgaaggat 850
 ttatccagc atacgggtctt agaatcatt tgcacagaag agtactcaac 900
 aggggtatata acaaatagca aaataatcca ctttgaatac aaagacaggt 950
 tgcgcgtttt tgctggacct cgctacgca atatggcttc cctctacgga 1000
 cagctggata caaccaagaa actcagagat ttctttacag tcacagacct 1050
 gaggataagg ctgttaagac cagccgttgg ggaatatatt gtagatgagc 1100
 tacacttggc acgctacttt tacgcgatct cagacataaa ggtgcgagga 1150
 aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200
 attgacatgc gaatgtgagc acaacactac aggtccagac tgtgggaaat 1250
 gcaagaagaa ttatcagggc cgaccttggg gtccaggctc ctatctcccc 1300
 atccccaaag gcaactgcaa tacctgtatc ccagtatatt ccagtattgg 1350
 tacgaatgtc tgcgacaacg agctcctgca ctgcagaaac ggagggaact 1400
 gccacaacaa cgtgcgctgc ctgtgcccg cgcatacac gggcatctc 1450
 tgcgagaagc tgcggtgcga ggaggctggc agctgcggct ccgactctgg 1500
 ccaggggcgc ccccgccagc gcaccccgag gctgctgctg ctgaccacgc 1550
 tgctgggaac cgcagcccc ctggtgttct aggtgtcacc tccagccaca 1600
 ccggacgggc ctgtgccgtg gggaagcaga cacaacccaa acatttgcta 1650
 ctaacatagg aaacacacac atacagacac cccaactcag acagtgtaca 1700
 aactaagaag gcctaactga actaagccat atttatcacc cgtggacagc 1750
 acatccgagt caagactgtt aatttctgac tccagaggag ttggcagctg 1800
 ttgatattat cactgcaaat cacattgcca gctgcagagc atatttgga 1850
 ttggaaggcg tgcgacagcc ccccaaacag gaaagacaaa aaacaacaa 1900
 atcaaccgac ctaaaaacat tggctactct agcgtggctg gcctagtac 1950
 gactccgccc agtgtgtgga ccaaccaaat agcattcttt gctgtcaggt 2000
 gcattgtggg cataaggaaa tctgttaca gctgccatat tggcctgctt 2050






















<211> 438

<213> Homo sapiens

Met Tyr Leu Ser Arg Ser Leu Ser Ile His Ala Leu Trp Val Thr
1 5 10 15

Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Glu Gly Lys Val Trp
35 40 45

Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro
65 70 75

Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu
95 100 105

Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgcaggac ctcggctacg gaattggctt cctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgtc cgggtgacct gggccgagcc etcccggtcg gctaagattg 50
ctgaggaggc ggcgggtagc tggcaggcgc cgaattccga aggccgccgt 100
ccgggcgagg tgtcctcatg acttctcttg tggaccatgt cagtcatctt 150
ttttgcctgc gtggtacggg taaggatgag actgcccttc tcagcctcta 200
ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
agtttagcct tgcgactggc ccagtatoca ggtcgagggt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggaactg gcttgcattg 350
 ctatctgtct ctgccagtgt ccagcagcca tggccttctg ctctctggag 400
 accctgtggt gggaattcac agcttctctat gacactacct gcattggcct 450
 agcctccagg ccatacgttt ttcttgagtt tgacagcatc attcagaaag 500
 tgaagtggca ttttaactat gtaagttcct ctccagatga gtgcagcttg 550
 gaaaaaatc aggaggagct caagttgcag cctccagcgg ttctcactct 600
 ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650
 acttggaacc tgctcctaatt ttccgaatgg aaccagtgc agccctgggt 700
 atctctctcc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
 aggagtccac cttgcagaac attctttaca ggatccaagg agctggtttc 800
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
 gagctctgat tctcccatcc gggagcagtg atgtcaaat tctgctgctg 900
 gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaat 950
 ctgggaatgg ctggattcgg aaacatctgc ccattgttat tgatggcaga 1000
 gctgttgccc acaagcgcct tttatttagg gtaaaattaa caaatccatt 1050
 ctattctctc gaccatgct tagtacatat gacctttaac cttacattt 1100
 atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
 gatttgatcc cccaggattc tattttgttt aatgggcttt tctactaaaa 1200
 gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250
 tattcgtttt caatacttgc tgttcattgtt acacaagctt cttacggttt 1300
 tcttgtaaca ataaatattt tgagtaaata atgggtacat ttaacaaac 1350
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 135
 Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly
 1 5 10 15
 Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe
 20 25 30
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala
 35 40 45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	50	55	60
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	65	70	75
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	80	85	90
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	95	100	105
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	110	115	120
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	125	130	135
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	140	145	150
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	155	160	165
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	170	175	180
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	185	190	195
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	200	205	210
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	215	220	225
Gln	Thr	Ser															

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttctctg agacctgtg gtgggaattc acagcttcnt atgacactac 50
 ctgcattggc nttagcctcca ggccatacgc ttttcttgag tttagacgca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

1140-1145

1140-1145

tgtctcctgg tctaagctc agcaactcct gtcttctctc gaacctggg 1550
 gctcaactgc tttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
 gcaatttcta cattgtgttc ctctacaacg cagcctttgc aggcctcacc 1650
 acactctgtc tgggtaagac cttoactgca gctgtgcggg cagagctgat 1700
 ccgggccttt gggctggaca gactgccgct gcccgcttcc ggtttcccc 1750
 aggcacatag gaagaccacg caccagtgac ctccagctgg ggggtgggaag 1800
 gaaaaaactg gacactgcca tctgctgcct aggcctggag ggaagcccaa 1850
 ggctacttgg acctcaggac ctggaatctg agaggggtggg tggcagaggg 1900
 gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
 ggacctcctg cttttccata cttaactgtg gccctagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcaactg tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150
 tcgggagata gattgtctcc cttgcctctg gcccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu
 1 5 10 15

Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe
 20 25 30

Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys
 35 40 45

Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val
 50 55 60

Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala
 65 70 75

Leu Gly Ala Val Leu Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu
 80 85 90

Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn
 95 100 105

Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro
 110 115 120

Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr

	125	130	135
Glu Ser Glu Gly Phe	Ala Gly Ser Arg	Lys Gly Val Leu Gly Arg	150
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu Val	165
Leu Gly Met Val	Trp Val Ala Ser Ala	Ile Val Asp Lys Asn Lys	180
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro	195
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu Leu	210
Val Cys Thr Pro	Leu Gly Leu Ala Arg	Met Phe Ser Val Thr Gly	225
Lys Leu Leu Val	Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu Gln	240
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg Ile	255
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu Leu	270
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu Glu	285
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr Pro	300
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val Leu	315
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala Ala	330
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser Phe	345
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu Ile	360
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser Pro	375
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met Thr	390
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser Ala	405
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp Leu	420
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr Ile	435
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu Cys	

tttaccctgg caattgccct ggggtgctgc ctgctcctgc cctttccat 500
catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
gactgtatct gagccccaga ctgc 24

<210> 142
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tcagcaatga ggtgctgctc 20

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
tgaggaagat gagggacagg ttgg 24

<210> 144
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
<211> 685
<212> DNA
<213> Homo sapiens

<400> 145
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
caaacctggt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150
gtcagtgagc agtttgcaag gacaccacag cccattattt tccctcagcc 200
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tctctgggtc aagtgatctg ctacactagg cctctcaaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaaacctg 600
 aataatacta tttaacaagaa tgataatgtc ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 cccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcgcgcgcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgcag aacctgagca ccttttgctt gttgctgcta 200
 tacctcatcg gggcggtgat tgcgcgacga gatttctata agatcttggg 250
 ggtgcctcga agtgccctcta taaaggatat taaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaatttcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaaggag 550
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca ccagctggg 700
 ccctgggcgc ttccaaatga ccagagggt ggtctgcgac gaatgcccta 750
 atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acgcatgga gtaccccttt attggaagag gtgagcctca 850
 cgtggatggg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaagggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcactggt tggctttgag atggatatta ctcaattgga 1000
 tggtcacaag gtacatattt ccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatc 1100
 aagggtcctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300
 ttttgtgtgt gtttttgttt ttattttcaa tatgcaagtt aggccttaatt 1350
 tttttatcta atgatcatca tgaatgaat aagagggtt aagaatttgt 1400
 ccatttgcat tcggaagaaga atgaccagca aaagggttac taataacctc 1450
 ccctttgggg atttaattgtc tgggtgctgcc gcctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gaggggttga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr	
1				5					10					15	
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu	
				20					25					30	
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr	
				35					40					45	
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp	
				50					55					60	
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu	
				65					70					75	
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly	
				80					85					90	
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile	
				95					100					105	
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr	
				110					115					120	
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile	
				125					130					135	
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe	
				140					145					150	
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly	
				155					160					165	
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	
				170					175					180	
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	
				185					190					195	
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	
				200					205					210	
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	
				215					220					225	
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg	
				230					235					240	
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly	
				245					250					255	
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu	
				260					265					270	
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val	
				275					280					285	
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp	
				290					295					300	

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310 315
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

 <400> 149
 tgggaccagg gaaccccggtg ccccccggtg gagngcctaa caggccggtg 50
 gntgcgaccg aagcggcggtg cggaggaggt ttgaggatt ttggaacag 100
 gacccgaca gaggaaccat ggttccgacg aacntgagca cnttttgctt 150
 gttgntgnta tacttcatcg gggcggtgat tgccggacga gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaagggcc 250
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
 acaagcccag gagaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtt atcagagctc ccatggagac attttttcac acttntttgg 450
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

 <210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

 <400> 150
 ggcacgaggc ggcggggcag tcgcgggatg cgcccgaggag ccacagcctg 50
 aggcctcag gtctctcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctotccccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtccaggag cccctctgaa gcatggagac tgtgtgtatt 200
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
 ggtgctggtt tgcaaggcag gctactgccg gccgcgagac ctgctgcagc 300

	35		40		45
Ile Val Asp Leu	Ile Gly Ala Met Glu	Thr Gln Ser Glu Pro Ser			
	50	55			60
Glu Leu Glu Leu Asp	Asp Val Val Ile	Thr Asn Pro His Ile Glu			
	65	70			75
Ala Ile Leu Glu Asn	Glu Asp Trp Ile	Glu Asp Ala Ser Gly Leu			
	80	85			90
Met Ser His Cys Ile	Ala Ile Leu Lys	Ile Cys His Thr Leu			
	95	100			105
Glu Lys Leu Val Ala	Met Thr Met Gly	Ser Gly Ala Lys Met Lys			
	110	115			120
Thr Ser Ala Ser Val	Ser Asp Ile Ile	Val Val Ala Lys Arg Ile			
	125	130			135
Ser Pro Arg Val Asp	Asp Val Val Lys	Ser Met Tyr Pro Pro Leu			
	140	145			150
Asp Pro Lys Leu Leu	Asp Ala Arg Thr	Thr Ala Leu Leu Leu Ser			
	155	160			165
Val Ser His Leu Val	Leu Val Thr Arg	Asn Ala Cys His Leu Thr			
	170	175			180
Gly Gly Leu Asp Trp	Ile Asp Gln Ser	Leu Ser Ala Ala Glu Glu			
	185	190			195
His Leu Glu Val Leu	Arg Glu Ala Ala	Leu Ala Ser Glu Pro Asp			
	200	205			210
Lys Gly Leu Pro Gly	Pro Glu Gly Phe	Leu Gln Glu Gln Ser Ala			
	215	220			225

Ile

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
 gcttcatttc tcccgactca gcttcccacc ctgggctttc cgagggtgctt 50
 tcgccgctgt ccccaccact gcagccatga tctccttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgttttttc tgttcttttg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg ctgggctttt gtaattgggt tagaagaagc attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtgc cttattggtt ggcccttgat aggcgatgac ttcgaaattt 350
 atggattttt tctcttggtc aggggcttct ttctgtcgct tgttggcttt 400
 attagaagag tgcagatcct tggatccctc ctaaaattac ctggaattag 450
 atcatttgta gataaagttg gagaaagcaa caatatggtg taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattttca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggaggtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaaact gagagagggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800
 tttagaagct gtggtgcctg tttcttttct tttattttg aaggctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgatttga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000
 ggattacttt tttttgngcn cagggcc 1027

<210> 153

<211> 138

<212> PRT

<213> Homo sapiens

<220>

<221> N-myristoylation Sites

<222> 11-16, 51-56 and 116-121

<223> N-myristoylation Sites.

<220>

<221> Transmembrane domains

<222> 12-30, 33-52, 69-89 and 93-109

<223> Transmembrane domains

<220>

<221> Aminoacyl-transfer RNA Synthetases.

<222> 49-59

<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153

Met	Ile	Ser	Leu	Thr	Asp	Thr	Gln	Lys	Ile	Gly	Met	Gly	Leu	Thr
1					5					10				15
Gly	Phe	Gly	Val	Phe	Phe	Leu	Phe	Phe	Gly	Met	Ile	Leu	Phe	Phe
					20				25					30
Asp	Lys	Ala	Leu	Leu	Ala	Ile	Gly	Asn	Val	Leu	Phe	Val	Ala	Gly
					35				40					45
Leu	Ala	Phe	Val	Ile	Gly	Leu	Glu	Arg	Thr	Phe	Arg	Phe	Phe	Phe
					50				55					60

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
 65 70
 Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
 80 85 90
 Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
 95 100 105
 Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
 110 115 120
 Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
 125 130 135
 Asn Met Val

<210> 154
 <211> 405
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 66
 <223> unknown base

<400> 154
 gaagacgtgg cggtctcgc ctgggctgtt tcccggttc atttctcccg 50
 actcagcttc ccacontggg ctttccgagg tgttttcgcc gctgtcccca 100
 ccaactgcagc catgatctcc ttaacggaca cgcagaaaaa tggaatggga 150
 ttaaccggat ttggagtgtt tttctgttc tttggaatga ttctcttttt 200
 tgacaaagca ctactggcta ttggaatgt tttatttgta gccggcttgg 250
 cttttgtaat tggtttagaa agaacattca gattctctt caaaaaacat 300
 aaaatgaaag ctacaggttt tttctgggt ggtgtatttg tagtccttat 350
 tggttggcct ttgataggca tgatcttcga aatttatgga tttttctct 400
 tgttc 405

<210> 155
 <211> 1781
 <212> DNA
 <213> Homo sapiens

<400> 155
 ggcacgaggc tgaaccagc cggtccatc tcagcttotg gtttotaagt 50
 ccatgtgcc aaggctgcc ggaaggagac gccttcctga gtccctggatc 100
 tttctctct ctggaatat ttgaactgtg gtatttattt atttctgaat 150
 aagagcgtcc acgcatcatg gacctcgcg gactgctgaa gtctcagttc 200
 ctgtgccacc tggctctctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctctctct ctggcccatt aacaagcagc 300
 tcttcocggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgtgtc tggagtgggt gtcgggcacg gaatgcacca tcttcacgga 400
 cccgcgcgcc tacctcaagt atgggaagga aatgccatc gtggttctca 450
 accacaagtt tgaattgac tttctgtgtg gctggagcct gtccgaacgc 500
 tttgggtctg tagggggctc caaggtcctg gccaaagaag agctggccta 550
 tgtcccaatt atcggctgga tgtggtactt caccgagatg gtcttctgtt 600
 cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag ttgcgagcac 650
 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcagggt gccccgggcca 750
 agggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggtctc 800
 gccatcaccg tgaggagctt gaaaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtccata 900
 acggaagaa ataccatgca gatttgtatg ttaggaggat cccactgtaa 950
 gacatccctg aagacgatga cgagtgtcgc gctgggtgcg acaagctcta 1000
 ccaggagaag gatgccttcc agggaggagta ctacaggacg gccaccttcc 1050
 cagagacgcc catggtgccc ccccgcgccg cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgtggtt gctctaccc tcttccagct tccgtgtcag 1150
 catgatcagg agcgggtctt cctgacgctt ggccagcttc atcctcgtct 1200
 tctttgtgac ctcggtggga gttcgtatga tgattggtgt gacggaaatt 1250
 gacaagggtc ctgcctacgg caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggttg 1350
 cctctgcata tctcctctag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgctgggc acggcggaag tcaogacctc tccagccagg gagtctggtc 1450
 tcaaggccgg atggggagga agatgttttg taatcttttt tccccatgt 1500
 gcttttagtg gctttggtt tctttttgtg cgagtgtgtg tgagaatggc 1550
 tgtgtgtgta gtgtgaactt tgttctgtga tcatagaaag ggtatttttag 1600
 gctgcagggg agggcagggc tggggaccga aggggacaag tcccccttc 1650
 atcctttggt gctgagtttt ctgtaaccct tggttgccag agataaagtg 1700
 aaaagtgctt taggtgagat gactaaatta tgccctccag aaaaaaaaaa 1750
 taaagtgctt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu
1				5					10					15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr
				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
				65					70					75
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala
				80					85					90
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly
				95					100					105
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val
				110					115					120
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met
				125					130					135
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln
				140					145					150
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr
				155					160					165
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe
				170					175					180
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys
				185					190					195
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly
				200					205					210
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val
				215					220					225
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu
				230					235					240
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val
				245					250					255
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys
				260					265					270
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln
				275					280					285
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val

290	295	300
Pro Pro Arg Arg	Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala	
305	310	315
Ser Leu Val Leu Tyr	Pro Phe Phe Gln Phe Leu Val Ser Met Ile	
320	325	330
Arg Ser Gly Ser Ser	Leu Thr Leu Ala Ser Phe Ile Leu Val Phe	
335	340	345
Phe Val Ala Ser Val	Gly Val Arg Trp Met Ile Gly Val Thr Glu	
350	355	360
Ile Asp Lys Gly Ser	Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys	
365	370	375
Leu Asn Asp		

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgaggcggc ggtagcatgg agggggagag tacgtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaaat tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaag agcaagcaact gaagaaaata ttatcaaatg tcaaaaagaa 300
 tgtggtaggt tggtaacaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaaacttg aggagcattt ttcaaaccac 400
 gaccttgttt ttctgtctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500
 acagggtacc tttagtggtt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcaggttc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgottcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagacctcta ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaatcttg aattttctta 900
 ttcattgtgt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	
				395					400					405	
Ser	Pro	Thr	Phe												

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
 ggcacagccg cgcgggcgag ggcagagtca gccagagccga gtccagccgg 50
 acgagcgggac cagcgccagg cagcccaagc agcgcgcagc gaacgcccgc 100
 cgccgcccac accctctgcg gtccccgcgg cgctgcccac ccttccctcc 150
 ttcccccgct ccccgctcgc ccggccagtc agcttgccgg gttcgctgcc 200
 ccgcgaaacc ccgaggtcac cagcccgcgc ctctgcttcc ctgggcccgc 250
 cgccgctccc acgcccctct tctccccctg cccggcgccct ggcacggggg 300
 accgttgccct gacgcgaggc ccagctctac ttttcgcccc gogtctcttc 350
 cgctctgctcg cctcttccac caactccaac tccttctccc tccagctcca 400
 ctcgctagtc ccgactccg ccagccctcg gccgctgcc gtagegcgcg 450
 ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg ccgcacccat 500
 ggacgggttc ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550
 ccgcgctgct ggctgcccag ctcaagtoga aaagttgctc ggaagtgcga 600
 cgtctttacg tgtccaaagg cttcaacaag aacgatgccc cctccacga 650
 gatcaacggt gatcattga agatctgtcc ccagggttct acctgctgct 700
 ctcaagagat ggaggagaag tacagcctgc aaagtaaaaga tgatttcaaa 750
 agtgtgtgtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
 ttacaagaag tttgatgaat tottcaaaga actacttgaa aatgcagaga 850
 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
 aattctgagc tatttaaaga tctcttcgta gagttgaaac gttactacgt 950
 ggtgggaaat gtgaacctgg aagaaatgct aatgacttc tgggctcgcc 1000
 tcctggagcg gatgttcgc ctggtgaact ccagtagcca ctttacagat 1050
 gagtatctgg aatgtgtgag caagtatacg ggcagctga agcccttcgg 1100
 agatgtccct cgcaaatgga agctccaggt tactcgtgct tttgtagcag 1150
 ccgactatt cgctcaaggc ttagcggttg cgggagatgt cgtgagcaag 1200
 gtctccgtgg taaaccccac agcccaggtg acccatgccc tgttgaagat 1250
 gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
 actactgctc aaacatcatg agagggtgtt tggccaacca aggggatctc 1350
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
 gctagagggg cctttcaaca ttgaatcggt catggatccc atcgatgtga 1450

agatttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500
 cagaaggttt tccagggatg tggacccccc aagccccctcc cagctggacg 1550
 aatttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcaccccgga ggaacgcca accacagcag ctggactag tttggaccga 1650
 ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctggtc 1700
 ctccctccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750
 gcaatgagga tgactgttgg aatgggaaag gcaaaagcag gtacctgttt 1800
 gcagtgcag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttogagtgat gaccagcaag atgaagaatg catacaatgg gaacgcagt 1950
 gacttctttg atatcagtga tgaaagtatg ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgcgaat gagaagccg acagtgtctg tctcgtctct 2100
 ggggcacagg cctacctct cactgtcttc tgcattctgt tctgtgttat 2150
 gcagagagag tggagataat tctcaaaact tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 tttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttggttc ctgctccccc aaaccatgtt aaacgtggct 2400
 aacagtgtag gtacagaaat atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgatg ttttttctc atttoggttg tgggtttttt 2500
 tttccaaactg tgatctcgcc ttgtttctta caagcaaacc agggctccctt 2550
 cttggcacgt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600
 agcagggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650
 c 2651

<210> 160
 <211> 556
 <212> PRT
 <213> Homo sapiens

<400> 160
 Met Ala Arg Phe Gly Leu Pro Ala Leu Leu Cys Thr Leu Ala Val
 1 5 10 15
 Leu Ser Ala Ala Leu Leu Ala Ala Glu Leu Lys Ser Lys Ser Cys
 20 25 30
 Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

35										40										45									
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys															
				50					55					60															
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr															
				65					70					75															
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln															
				80					85					90															
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe															
				95					100					105															
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu															
				110					115					120															
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn															
				125					130					135															
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr															
				140					145					150															
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp															
				155					160					165															
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr															
				170					175					180															
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu															
				185					190					195															
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln															
				200					205					210															
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu															
				215					220					225															
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro															
				230					235					240															
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser															
				245					250					255															
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys															
				260					265					270															
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp															
				275					280					285															
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu															
				290					295					300															
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile															
				305					310					315															
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser															
				320					325					330															
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys															
				335					340					345															
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala															

350	355	360
Phe Ser Ala Arg Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr	
365	370	375
Thr Ala Ala Gly Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys	
380	385	390
Glu Lys Leu Lys Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser	
395	400	405
Asn Val Cys Asn Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu	
410	415	420
Asp Asp Cys Trp Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala	
425	430	435
Val Thr Gly Asn Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val	
440	445	450
Gln Val Asp Thr Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile	
455	460	465
Met Ala Leu Arg Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn	
470	475	480
Gly Asn Asp Val Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly	
485	490	495
Glu Gly Ser Gly Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu	
500	505	510
Phe Asp Tyr Asn Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu	
515	520	525
Lys Ala Asp Ser Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu	
530	535	540
Leu Thr Val Phe Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp	
545	550	555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctccgtggta aaccccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
gggtctcgtga ctgtgaagcc atgttacaac tactgtctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccagcag 100
ggaaccttcc attatattct tcaagcaact tacagctgca cgcacagttg 150
cgatgaaagt tctaatctct tccctcctcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
ggaccgaggc caggcttcta ggagatggct ccagggaaggc ggccaagaat 300
gtgagtgcaa agattggttc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa goagtgcccc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgccact cttccaatta aacatttcta 550
gccaaagaag cagtgagcac acctaccaga cactcttctt ctccacctc 600
actctccacc tgtaccacc cctaaatcat tccagtgtc tcaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
cgtcagctct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaagatt ccaggaaact gtagcttctt agctagtgtc atttaacctt 800
aaatgcaatc aggaagtag caaacagaag tcaataataa tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gcctgacagt tgctcctggga ctgcttgtct 50
 tattcctgac ctgctatgca gacgacaaac cagacaagcg agacgacaag 100
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gacgacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca ccatgtggc tcctggacaa 300
 tccaagagca gccaaatcct gcttttccag ttgggtcca caagtctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaa ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

20	25	30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe		
35	40	45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala		
50	55	60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met		
65	70	75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys		
80	85	

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgccagc gctcgacag gctgagcagg gaaaaagcca gtgccccagc 50
 ggaagcacag ctcagagctg gtctgccatg gacatccttg tccactcct 100
 gcagctgctg gtgctgttc ttaccctgcc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa cgcgaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctcggggaat gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagtctta cccacgggc 350
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg ttgtggtggtg 450
 ctctcgaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500
 gtctgcactc tgggtgctg ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagtttcc 650
 gagcccactc ggaaacacat tggggatggc tgctgacctc ccagagagac 700
 ctggaaggat cttgagaacg ccagttctc cgaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800
 gctgtcaaac aatctttccc aagctccaag gcactcattt gtcctctccc 850
 cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900
 gagggaaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgccttc 1000
 gacagtga aaagctctact tctacgtgta cccagggagg aaacactagg 1050
 acctgttgtt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

gctcccaat gttgtccctt tccttcgttc ccatggtaaa gctcctctcg 1150
 ctttcctcct gaggctacac ccatgcgtct cttaggaactg gtcacaaaag 1200
 tcatgggtgcc tgcacccctg ccaagccccc ctgaccctct cccccacta 1250
 ccacattctt cctgagctgg gggcaccagg gagaatcaga gatgtgggg 1300
 atgccagagc aagactcaaa gaggcagagg tttgttctc aaatattttt 1350
 taataaatag acgaaaccac g 1371

<210> 169
 <211> 277
 <212> PRT
 <213> Homo sapiens

<400> 169
 Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu 15
 1 5 10
 Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro 30
 20 25
 Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro 45
 35 40
 Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser 60
 50 55
 Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu 75
 65 70
 Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro 90
 80 85
 Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys 105
 95 100
 Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu 120
 110 115
 Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp 135
 125 130
 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val 150
 140 145
 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg 165
 155 160
 Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr 180
 170 175
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp 195
 185 190
 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys 210
 200 205
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln 225
 215 220

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240
 Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255
 Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270
 Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
 gtgggattta tttgagtgca agatcgTTTT ctcagtggtg gtggaagttg 50
 cctcatcgca ggcagatggt ggggctttgt ccgaacagct cccctctgcc 100
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctctctttac tgggttttga ccataacttc ctcagcttga gcagtttggt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtoccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtggtca tgcgtgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca aactcgcgc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaacttt 550
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaatc tggttccag cgcaaagaag 650
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700
 ttacaatata gcaactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgatttcag ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
 aattacattg gctatcttga ctataaaaag gaaagaatcc gtaagctttc 850
 catgaaagcc agcacttgct catttaaatcc tggagttttt gttgcaaacc 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
 aaactcaatg tagaagaggg actgtatago agaaccctgt ctggtagcat 1000
 cacaacacct cctctgctta tcgtatttta tcaacagcag tctaccatcg 1050
 atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100
 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaaca taaagtgaag cagaatttga actgtaagca agcattttctc 1300
 aggaagtctct ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
 atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gctgatctg 1600
 taaataaaac ttacattttt c 1621

<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val
1				5					10					15
Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser
				20					25					30
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro
				35					40					45
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp
				50					55					60
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp
				65					70					75
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn
				80					85					90
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr
				95					100					105
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser
				110					115					120
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly
				125					130					135
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu
				140					145					150
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys
				155					160					165
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile
				170					175					180
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala

	185		190		195
Phe Ser Glu Asp	Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg			
	200		205		210
Gly Ala Gly Asn	Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys			
	215		220		225
Lys Glu Arg Ile	Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser			
	230		235		240
Phe Asn Pro Gly	Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg			
	245		250		255
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val			
	260		265		270
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr			
	275		280		285
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp			
	290		295		300
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg			
	305		310		315
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn			
	320		325		330
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val			
	335		340		345
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu			
	350		355		360
Ile Arg Arg Tyr	Thr Glu Ile Ser Asn	Ile Lys			
	365		370		

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

tggtttttgc cccataaatt ccctcagctt gagcagtttg ttaaggaatg 50
 aggttacaga ttcaggaatt ntagnncctc aacctntaga ntttgtccca 100
 aatgtttctc gacatgcagt agatgggaga caagaggaga ttcctgtggt 150
 catcgctgca tntgaagaca ggcttggggg gccattgca gctataaaca 200
 gcattcagca caacaactcg tccaatgtga tttttacat tgttactctc 250
 aacaatacag cagacatnt cgggtcctgg ntcaacagtg attccctgaa 300
 aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450
catggatgat gatgtaattg tgcaagggtga tattcttgcc ctttacaata 500
cagcaactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550
gcctctaacta aagtgtgcat ccgtggagca ggaaa 585

<210> 173
<211> 1866
<212> DNA
<213> Homo sapiens

<400> 173
cgacgctcta gcggttacgc ctgcgggctg gctggggcgt gtggggctgc 50
gcggctgcca cggagctaga gggcaagtgt gctcgcccca gcgtgcaggg 100
aacgcggggc gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
gctgagctgg cagggcgggt cggggcgcgg gctgcatcgc catctcctcc 200
atcgccctga gtaaggcgcg ccgcgcgcgag cctttgaggg gaacgacttg 250
tcggagccct aaccaggggt gtctctgagc ctggtgggat ccccgagagc 300
tcacatcact ttccgatcac ttcaaagtgg ttaaaaaacta atatttatat 350
gacagaagaa aaagatgtca ttccgtaaaag taaacatcat catcttggtc 400
ctgggctggt gctctcttct tactgggttt gcaccataac ttccctagct 450
tgaggcagtt tgtaaggaa tgaggttaca gattcaggaa ttgtagggcc 500
tcaacctata ggaactttgc ccaaatgctc tccgacatgc agtagatggg 550
agacaagagg agattcctgt ggtcatcgct gcactggaag acaggcttgg 600
gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
tgggctcaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750
ttgaccctaa acttttgga ggaaaagtaa aggaggatcc tgaccagggg 800
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
ttcccagcgc aaagaaggcc atatacatgg atgatgatg aattgtgcaa 900
ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
tgcatattca gaagattgtg attcagcctc tactaaagtt gtcacccgtg 1000
gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaggaa 1050
agaattcgtg agctttccat gaaagccagc acttgctcat ttaactcctg 1100
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
 acagcactct accatcgatc ctatgtggaa tgtccgccac ctgtgttcca 1300
 gtgctggaaa acgatattca cctcagtttg taaaggctgc caagtactc 1350
 cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
 tgtttgggga aaaatgggat attccagacc caacaggcaa attcaacct 1450
 atccgaagat ataccgagat ctcaaacata aagtgaacaa gaatttgaac 1500
 tgtaagcaag catttctcag gaagtctcgg aagatagcat gcgtgggaag 1550
 taacagttgc taggcttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600
 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
 ccagacagac tatagactat aaatatgtct ccatctgcct tacciaagtg 1700
 tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750
 tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
 aacctgtggc ctgatctgta aataaaaactt acatttttca ataggtaaaa 1850
 aaaaaaaaaa aaaaaa 1866

<210> 174
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 174
 ctgcaggtag acatctccac tgcccaggaa tcaactgagcg tgcagacagc 50
 acagcctcct ctgaaggccg gccataccag agtctcgctt cggcatgggc 100
 ctacaccattg aggcagctcc actgtctgtg ctggctctgag ggtgtgcct 150
 gtcattggggg cagccatctc ccaggggggc ctcatcgcca tgcctcgcaa 200
 cggctctcgtg ggcttcttgc tgcgtctgct ctgggtcacc ctctgctggg 250
 cctgcacatc tegtctgcg acgttgactc tctctctgaa tccagtccca 300
 actccagccc tggcccctgt cctgagaagg ccccaaccac ccagaagccc 350
 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
 tggagcccag gacctaaagt caccctacat agagcctgga attaggtacc 450
 cagagttcag ccagcctggg gtccagaact caagagtcgg cctgcttgga 500
 gctggaccaca gcggcccaga gtctagccag ctgggtctca ataggagctc 550
 agtgccccta aggagatggg cctgggggtg gggcttatga gttgggtcta 600
 gaggcagggc catctggact atgctccatc ccaagggcca agggctcagg 650
 gcgggttcca ctcttccctt aggctgagca cctctaggcc ctctaggttg 700
 gggaagcaaa ctggaaccca tggcaataat agggagggtg ccaggctggg 750

ccctccct ggtctccca gtgtttgtg gataataaat ggaactatg 800

ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys
1 5 10 15

Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Trp Val Ile Leu
20 25 30

Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
50 55 60

His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
65 70 75

Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
80 85

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

gtttgaattc cttcaactat acccacagtc caaaagcaga ctactgtgt 50

ccagggtac cagttctcc aagcaagtca tttcccttat ttaaccgatg 100

tgctccctcaa acacctgagt gctactccct atttgcattt gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatctctgca ttagccttgt ctttggccat 250

gatgtttacc ttcagattca tcaccacct tctggttcac attttcattt 300

cattggttat ttggggattg ttgtttgtct gcggtgtttt atggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400

aaatatgaag tgcgtgctgg ggtttgctat cgtatccaca ggcacacgg 450

cagtgtctgt cgtcttgatt ttgtttctca gaaagagaat aaaattgaca 500

gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttcc 550

gctgttccag ccactgtgga catttgccat cctcattttt ttctgggtcc 600

tctgggtggc tgtgtgctg agcctgggaa ctgcaggagc tgcccagggt 650

atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700

gtggtcgtac catttaattg gcctcatctg gactagttaa ttcatcttg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850
 tctctttctc taccatcaag gaaccgttgt gaaagggtca tttttaatct 900
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950
 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgctgcta 1000
 ctgctgtttc tgggtgtcttg acaaatacct gctccatctc aaccagaatg 1050
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatcttgtc caagaactca agtcacttta catctattaa 1150
 ctgctttgga gacttcataa tttttctagg aaagggttta gtggtgtgtt 1200
 tcaactgttt tggaggactc atggctttta actacaatcg ggcattccag 1250
 gtgtgggcag tccctctgtt attggtagct tttttgcct acttagtagc 1300
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350
 gttttgctgt tgatctggaa acaaatgatg gatcgcaga aaagccctac 1400
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaatataa 1450
 caatgcaagg gcacagcagg acaagcactc attaaaggaat gaggagggaa 1500
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550
 ggaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaaa ttagtgaatt tttttttaa agacctataa aacctattc 1650
 ttctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu
 1 5 10 15
 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

	95	100	105
Glu Leu Phe Gln Ile Thr Asn Lys Ala	110	Ile Ser Ser Ala Pro Phe	120
Leu Leu Phe Gln Pro Leu Trp Thr Phe	125	Ala Ile Leu Ile Phe Phe	135
Trp Val Leu Trp Val Ala Val Leu Leu Ser	140	Leu Gly Thr Ala Gly	150
Ala Ala Gln Val Met Glu Gly Gly Gln Val Glu Tyr Lys Pro Leu	155		165
Ser Gly Ile Arg Tyr Met Trp Ser Tyr His Leu Ile Gly Leu Ile	170		180
Trp Thr Ser Glu Phe Ile Leu Ala Cys Gln Gln Met Thr Ile Ala	185		195
Gly Ala Val Val Thr Cys Tyr Phe Asn Arg Ser Lys Asn Asp Pro	200		210
Pro Asp His Pro Ile Leu Ser Ser Leu Ser Ile Leu Phe Phe Tyr	215		225
His Gln Gly Thr Val Val Lys Gly Ser Phe Leu Ile Ser Val Val	230		240
Arg Ile Pro Arg Ile Ile Val Met Tyr Met Gln Asn Ala Leu Lys	245		255
Glu Gln Gln His Gly Ala Leu Ser Arg Tyr Leu Phe Arg Cys Cys	260		270
Tyr Cys Cys Phe Trp Cys Leu Asp Lys Tyr Leu Leu His Leu Asn	275		285
Gln Asn Ala Tyr Thr Thr Ala Ile Asn Gly Thr Asp Phe Cys	290		300
Thr Ser Ala Lys Asp Ala Phe Lys Ile Leu Ser Lys Asn Ser Ser	305		315
His Phe Thr Ser Ile Asn Cys Phe Gly Asp Phe Ile Ile Phe Leu	320		330
Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met	335		345
Ala Phe Asn Tyr Asn Arg Ala Phe Gln Val Trp Ala Val Pro Leu	350		360
Leu Leu Val Ala Phe Phe Ala Tyr Leu Val Ala His Ser Phe Leu	365		375
Ser Val Phe Glu Thr Val Leu Asp Ala Leu Phe Leu Cys Phe Ala	380		390
Val Asp Leu Glu Thr Asn Asp Gly Ser Ser Glu Lys Pro Tyr Phe	395		405
Met Asp Gln Glu Phe Leu Ser Phe Val Lys Arg Ser Asn Lys Leu			

	410		415		420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu					
	425		430		435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg					
	440		445		

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
 gttcgattag ctccctctgag aagaagagaa aagggtcttg gacctctccc 50
 tgtttcttcc ttagaataat ttgtatggga ttgtgatgc aggaagacct 100
 aagggaaaaa gaattatcat tctgtgtggt gaaaattttt tgaaaaaaa 150
 attgccttct tcaacaaggt gtgtcattct gatatttatg aggactgttg 200
 ttctcactat gaaggcatct gttattgaaa tgttccttgt ttgtctggtg 250
 actggagtag attcaacaa agaaacggca aagaagatta aaagcccaa 300
 gttcaactgtg cctcagatca actgcgatgt caaagccgga aagatcatcg 350
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaga ccccaatac 400
 catgtttatg gcactgacgt gtagtcatcc tactccagtg tgtgtggcgc 450
 tgccgtacac agtgggtgac ttgataatc aggagggaaa atactgttc 500
 ggaagggtgc tggacagtct gggtacaaag ggagtatttc caacggtgac 550
 caatcgttat ccctaccaac atggagagaa tcctttatcg tcttagaaa 600
 taaacccaaa aagggtgtaa cctaccatc agctcttaca tactcatcat 650
 cgaaaagtcc agctgcccaa gcaggtgaga ccacaaaagc ctatcagagg 700
 ccacctatc cagggacaac tgcacagcgc gtcactctga tgcagcttct 750
 ggctgtcact gtagctgtgg ccacccccac cactcttcca aggcacatcc 800
 cttctgtctg ttctaccacc agcatcccca gaccacaatc agtgggccac 850
 aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900
 aaacaggccc agagctgac caggtatcca aagcaagat ccttcaggag 950
 ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttgttcca 1000
 aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050
 aaactgcaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100
 gcaaacggcg attccgaatc cagaagcagc tctgggctga tgttgcccaa 1150
 gctcttgaca ttggccctgc cgttccactg atgggtgttg tccagtagtg 1200
 agacaaccct gctactcact ttaacctcaa gacacacacg aattctcgag 1250

atctgaagac agccatagag aaaattactc agagaggagg acttttcta 1300
 gtaggtcggg coactcctt tgtgaccaag aacttctttt ccaaagccaa 1350
 tggaaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400
 ggcccacgga caaagtggag gaggcttcaa gacttgcgag agagtcagga 1450
 atcaacattt tottcatca cttggaaggt gctgctgaaa atgagaagca 1500
 gtatgtgggt gagcccaact ttgcaaacaa ggccgtgtgc agaacaacg 1550
 gcttctactc gctccacgtg cagagctggt ttggcctcca caagaccctg 1600
 cagcctctgg tgaagcgggt ctgcgacact gaccgctgg cctgcagcaa 1650
 gacctgcttg aactoggctg acattggctt cgtcatcgac ggctccagca 1700
 gtgtggggac gggcaacttc cgcaccgtcc tccagtttgt gaccaacctc 1750
 accaaagagt ttgagatttc cgacacggac acgcgcctg gggcgtgca 1800
 gtacacctac gaacacggc tggagtgttg gttcgacaag tacagcagca 1850
 agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgggtgc 1900
 accagcagcg gggctgccat caacttcgcc ctggagcagc tcttcaagaa 1950
 gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggaggt 2000
 cctacgacga cgtccggatc ccagccatgg ctgcccatc gaaggagtg 2050
 atcacctatg cgataggcgt tgccctggct gcccaagagg agctagaagt 2100
 cattgccact caccocgcca gagaccactc cttctttgtg gacgagtttg 2150
 acaacctcca tcagtatgtc ccaggatca tccagaacat ttgtacagag 2200
 ttcaactcac agcctcggaa ctgaattcag agcaggcaga gccaccagca 2250
 gtgctgcttt actaactgac gtgttgacc accccaccgc ttaatggggc 2300
 acgcacgggt catcaagtct tgggcagggc atggagaaa aaatgtcttg 2350
 ttattattct ttgccatcat gctttttcat attccaaaa ttggagtac 2400
 aaagatgatc acaaacgtat agaatgagcc aaaaggctac atcatgttga 2450
 ggggtctgga gattttacat ttgacaatt gttttcaaaa taaatgttcg 2500
 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550
 ttttaagttg tatttctgat ttgaactctg taaccctcag caagtttcat 2600
 ttttgtcatg acaatgtagg aattgctgaa ttaaatgttt agaaggatga 2650
 aaaataaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
 aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met	1	5	10	15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr	20	25	30	30
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	35	40	45	45
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	60
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	75
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	90
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	105
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	120
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	135
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	140	145	150	150
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	155	160	165	165
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	170	175	180	180
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	195
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	200	205	210	210
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	225
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	230	235	240	240
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	255
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	260	265	270	270
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly				

290										295										300									
Ser	Thr	Ser	Ile	Gly	Lys	Arg	Arg	Phe	Arg	Ile	Gln	Lys	Gln	Leu															
				305					310					315															
Leu	Ala	Asp	Val	Ala	Gln	Ala	Leu	Asp	Ile	Gly	Pro	Ala	Gly	Pro															
				320					325					330															
Leu	Met	Gly	Val	Val	Gln	Tyr	Gly	Asp	Asn	Pro	Ala	Thr	His	Phe															
				335					340					345															
Asn	Leu	Lys	Thr	His	Thr	Asn	Ser	Arg	Asp	Leu	Lys	Thr	Ala	Ile															
				350					355					360															
Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala															
				365					370					375															
Ile	Ser	Phe	Val	Thr	Lys	Asn	Phe	Phe	Ser	Lys	Ala	Asn	Gly	Asn															
				380					385					390															
Arg	Ser	Gly	Ala	Pro	Asn	Val	Val	Val	Val	Met	Val	Asp	Gly	Trp															
				395					400					405															
Pro	Thr	Asp	Lys	Val	Glu	Glu	Ala	Ser	Arg	Leu	Ala	Arg	Glu	Ser															
				410					415					420															
Gly	Ile	Asn	Ile	Phe	Phe	Ile	Thr	Ile	Glu	Gly	Ala	Ala	Glu	Asn															
				425					430					435															
Glu	Lys	Gln	Tyr	Val	Val	Glu	Pro	Asn	Phe	Ala	Asn	Lys	Ala	Val															
				440					445					450															
Cys	Arg	Thr	Asn	Gly	Phe	Tyr	Ser	Leu	His	Val	Gln	Ser	Trp	Phe															
				455					460					465															
Gly	Leu	His	Lys	Thr	Leu	Gln	Pro	Leu	Val	Lys	Arg	Val	Cys	Asp															
				470					475					480															
Thr	Asp	Arg	Leu	Ala	Cys	Ser	Lys	Thr	Cys	Leu	Asn	Ser	Ala	Asp															
				485					490					495															
Ile	Gly	Phe	Val	Ile	Asp	Gly	Ser	Ser	Ser	Val	Gly	Thr	Gly	Asn															
				500					505					510															
Phe	Arg	Thr	Val	Leu	Gln	Phe	Val	Thr	Asn	Leu	Thr	Lys	Glu	Phe															
				515					520					525															
Glu	Ile	Ser	Asp	Thr	Asp	Thr	Arg	Ile	Gly	Ala	Val	Gln	Tyr	Thr															
				530					535					540															
Tyr	Glu	Gln	Arg	Leu	Glu	Phe	Gly	Phe	Asp	Lys	Tyr	Ser	Ser	Lys															
				545					550					555															
Pro	Asp	Ile	Leu	Asn	Ala	Ile	Lys	Arg	Val	Gly	Tyr	Trp	Ser	Gly															
				560					565					570															
Gly	Thr	Ser	Thr	Gly	Ala	Ala	Ile	Asn	Phe	Ala	Leu	Glu	Gln	Leu															
				575					580					585															
Phe	Lys	Lys	Ser	Lys	Pro	Asn	Lys	Arg	Lys	Leu	Met	Ile	Leu	Ile															
				590					595					600															
Thr	Asp	Gly	Arg	Ser	Tyr	Asp	Asp	Val	Arg	Ile	Pro	Ala	Met	Ala															

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
 caggatgaac tgggtgcagt ggctgctgct gctgcggggg cgctgagagg 50
 acacgagctc tatgccttcc cggtgctca tcccgctcgg cctcctgtgc 100
 gcgctgtgc ctcagcacca tgggtgcgcca ggtcccgacg gtcccgcgcc 150
 agatcccgcc cactacagtt tttctctgac tctaattgat gcactggaca 200
 ccttgctgat tttgggaat gtctcagaat tccaaagagt ggttgaagt 250
 ctocaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctcctcccag cctttcagac 450
 ccccactggc atgccatag gaacagtga cttacttcat ggcgtgaacc 500
 caggagagac cctgtcacc tgtacggcag ggattgggac cttcattgtt 550
 gaatttgcca cctgagcag cctcactggt gaccgggtg tcgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccgggtc gatatcgggc 650
 tggtcggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700
 gcaggcatcg gggctggcgt ggactcctac tttgagta ctggtgaaagg 750
 agccatcctg cttcaggata agaagctcat ggccatgttc cttaggtata 800
 acaaaagcat ccggaactac acccgcttcg atgactggta cctgtggggt 850
 cagatgtaca aggggactgt gtccatgcca gtcttccagt ccttgagggc 900
 ctactggcct ggtcttcaga gcctcatttg agacattgac aatgccatga 950
 ggacccctct caactactac actgtatgga agcagtttgg ggggctcccc 1000

gaattctaca acatttcctca gggatacaca gtggagaagc gagagggcta 1050
 ccactctgg ccagaactta ttgaaagcgc aatgtacctc taccgtgccca 1100
 cggggggtacc caccctccta gaactcggaa gagatgtgtt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcgggattt gcaacaatca aagatctgcg 1200
 agaccacaag ctggacaacc gcatggagtc gttcttctctg gccgagactg 1250
 tgaaatacct ctacctctctg tttagaccaa ccaacttcac ccacaacaat 1300
 ggggtccacct tcgacgcggt gatcaccccc tatggggagt gcatctctggg 1350
 ggctgggggg tacatcttca acacagaagc taccctccac gacctgccc 1400
 ccctgcactg ctgccagagg ctgaaggaag agcagtgga ggtggaggac 1450
 ttgatggagg aattctactc tctcaaacgc agcaggtcga aatttcagaa 1500
 aaacactgtt agttcggggc catgggaacc tccagcaagg ccaggaaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gctgccaaa 1600
 cagaaggctc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcattactg ggacaggttt tctagactc ctcataacca ctggataatt 1700
 tttttttttt tttttttttg aggctaaact ataataaatt gcttttggtc 1750
 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
 Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu
 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

					125					130					135
Tyr	Gly	Thr	Val	Asn	Leu	Leu	His	Gly	Val	Asn	Pro	Gly	Glu	Thr	
				140					145					150	
Pro	Val	Thr	Cys	Thr	Ala	Gly	Ile	Gly	Thr	Phe	Ile	Val	Glu	Phe	
				155					160					165	
Ala	Thr	Leu	Ser	Ser	Leu	Thr	Gly	Asp	Pro	Val	Phe	Glu	Asp	Val	
				170					175					180	
Ala	Arg	Val	Ala	Leu	Met	Arg	Leu	Trp	Glu	Ser	Arg	Ser	Asp	Ile	
				185					190					195	
Gly	Leu	Val	Gly	Asn	His	Ile	Asp	Val	Leu	Thr	Gly	Lys	Trp	Val	
				200					205					210	
Ala	Gln	Asp	Ala	Gly	Ile	Gly	Ala	Gly	Val	Asp	Ser	Tyr	Phe	Glu	
				215					220					225	
Tyr	Leu	Val	Lys	Gly	Ala	Ile	Leu	Leu	Gln	Asp	Lys	Lys	Leu	Met	
				230					235					240	
Ala	Met	Phe	Leu	Glu	Tyr	Asn	Lys	Ala	Ile	Arg	Asn	Tyr	Thr	Arg	
				245					250					255	
Phe	Asp	Asp	Trp	Tyr	Leu	Trp	Val	Gln	Met	Tyr	Lys	Gly	Thr	Val	
				260					265					270	
Ser	Met	Pro	Val	Phe	Gln	Ser	Leu	Glu	Ala	Tyr	Trp	Pro	Gly	Leu	
				275					280					285	
Gln	Ser	Leu	Ile	Gly	Asp	Ile	Asp	Asn	Ala	Met	Arg	Thr	Phe	Leu	
				290					295					300	
Asn	Tyr	Tyr	Thr	Val	Trp	Lys	Gln	Phe	Gly	Gly	Leu	Pro	Glu	Phe	
				305					310					315	
Tyr	Asn	Ile	Pro	Gln	Gly	Tyr	Thr	Val	Glu	Lys	Arg	Glu	Gly	Tyr	
				320					325					330	
Pro	Leu	Arg	Pro	Glu	Leu	Ile	Glu	Ser	Ala	Met	Tyr	Leu	Tyr	Arg	
				335					340					345	
Ala	Thr	Gly	Asp	Pro	Thr	Leu	Leu	Glu	Leu	Gly	Arg	Asp	Ala	Val	
				350					355					360	
Glu	Ser	Ile	Glu	Lys	Ile	Ser	Lys	Val	Glu	Cys	Gly	Phe	Ala	Thr	
				365					370					375	
Ile	Lys	Asp	Leu	Arg	Asp	His	Lys	Leu	Asp	Asn	Arg	Met	Glu	Ser	
				380					385					390	
Phe	Phe	Leu	Ala	Glu	Thr	Val	Lys	Tyr	Leu	Tyr	Leu	Leu	Phe	Asp	
				395					400					405	
Pro	Thr	Asn	Phe	Ile	His	Asn	Asn	Gly	Ser	Thr	Phe	Asp	Ala	Val	
				410					415					420	
Ile	Thr	Pro	Tyr	Gly	Glu	Cys	Ile	Leu	Gly	Ala	Gly	Gly	Tyr	Ile	
				425					430					435	
Phe	Asn	Thr	Glu	Ala	His	Pro	Ile	Asp	Leu	Ala	Ala	Leu	His	Cys	

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met	
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln Lys	
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro Gly	
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys	
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln Pro	
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp Ser	
530	535	540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggt tgggcagaaa ggaggggtgct tcggagcccg ccctttctga 100
 gcttcctggg coggctctag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgttctag gtcaaaactga gtctacaaaa 250
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcagt 300
 tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tctgctgcgc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450
 gtcgaaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 cccacgcagc tgggtgctcac tcaactgaagg tcttgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttacccgac ctgggatgga gatcaccaaa gatggcttcc 700
 acctggttat tgagctggag gacctggggc ccagtttga gttcctgtgt 750
 gcctactgga ggagggagcc tgggtgccgag gaacatgtca aaatggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900
 ttcacgcaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccctggt 950
 actggccctg tttgcctttg ttggcttcat gctgatcctt gtggtcgtgc 1000
 cactgttctg ctggaaaatg ggcgggtctg tccagtactc ctgttgcccc 1050
 gtggtgtgtc tccagacac cttgaaaata accaattcac cccagaagtt 1100
 aatcagctgc agaaggagg aggtggatgc ctgtgccagc gctgtgatgt 1150
 ctctcgagga actcctcagg gcctggatct cataggtttg cggaggggcc 1200
 caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgtgt tctacaagtc tagaagcaac catcagaggc aggggtgttt 1350
 gtctaacaga aactgactg aggccttaggg gatgtgacct ctgactggg 1400
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcacocctt 1450
 cggtcctaag ttttctcctc tgtaatgggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccacgc acttgcaagg ctagagggaa actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtggcttg gagagcccac ttcccagaa 1700
 taatccttga gaaaaagga atcatgggag caatgtgtgt gagttcactt 1750
 caagcccaat gcoggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaagtgtg tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-29

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
1				5					10					15	
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tga 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgcctac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggtgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggccc ccaccacttt aacgtgctcg ccttccctcg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgccgcgcg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
ctggtgcccc tectgecttc aagtacctgg cccagacttc tgggaaggag 450
cccacctgga acttctgga gtacctagta gcccagatg gaaagtggtg 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaatgggtg cttcaaaggg agagacccac tgactctcct 700
 tcttttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaata gaagtatatc aagcaataat ctcccaccca 900
 aggcctctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attagatga aatacctgtg aaagtgccta ggcagtgcca gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcataata accaaaaaat aacttggtat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaagggtta gttgttgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taataatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala 15
 1 5 10
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala 30
 20 25
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly 45
 35 40
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr 60
 50 55
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly 75
 65 70
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly 90
 80 85
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg 105
 95 100
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val 120
 110 115
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr 135
 125 130
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala 150
 140 145
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

155 160 165
 Glu Glu Val Arg Pro Gln Ile Thr Ala Leu Val Arg Lys Leu Ile
 170 175 180
 Leu Leu Lys Arg Glu Asp Leu
 185

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctgggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaaactgg tgctcgtgga gaagtaccgc ggatcgggtg 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcgggccgg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgcggggag ctccgggggtg 100
 ctggggggccc gggcgcgcct ctctcggagt tggcaggaag ccaggttgca 150
 ggggtgtccc ttctcagtt ccagagaggt ggatcgcgat gtctccacgc 200
 ccatcggagg cctcagctac gtccaggggt gcacacaaaa gcattctaac 250
 agcaagactg tgggccagt cctggagacc acagcacaga ggggtcccaga 300
 acgagagggc ttggtcgtcc tccatgaaga cgtcagggtg acctttgccc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct ggcattggc 400

ctcttgc	caaaag	gtgac	cggcct	gggcatt	gtgg	ggaccta	aact	cotatg	catg	450	
gggtg	ctcatg	cagttg	ggcca	ccgcc	caggc	gggcatt	catt	cttggtg	tctgt	500	
tga	aaccag	ctacc	aggct	atgga	actgg	agtat	gtctct	caaga	agggtg	550	
ggctg	caaaag	ccctt	gtgtt	cccca	agcaa	ttaaga	acc	agcaata	acta	600	
caacg	tcctg	aagc	agatct	gtcca	gaagt	ggaga	aatgcc	cagcc	agggg	650	
ccttga	agag	tcagag	ggctc	ccagat	cttga	ccacag	tcat	ctcgg	tggat	700	
gcccc	tttgc	cgggg	accct	gctc	ctggat	gaagt	gggtg	cggctg	gcag	750	
cacac	ggcag	catct	ggacc	agctc	caata	caacc	agcag	tctct	gtctct	800	
gcoat	gacc	catca	acatc	cagtt	cacct	cgggg	acaac	aggcag	cccc	850	
aagggg	ggcca	ccctc	tccca	ctaca	acatt	gtca	acaact	ccaac	atttt	900	
aggag	agcgc	ctgaa	actgc	atgag	aagac	accag	agcag	ttg	cggatga	950	
tcttg	cccaa	cccc	gtgac	cattg	cctgg	gttc	cggtgc	aggc	acaatg	1000	
atgtg	tctga	tgtac	gggtgc	cacctc	atc	ctgg	cctctc	ccat	cttcaa	1050	
tggca	agaag	g	cactggag	ccat	cagcag	agag	agaggc	acctt	cctgt	1100	
atggt	acccc	cacgat	gtgc	gtgg	acattc	tga	aaccag	gcc	agactt	ctcc	1150
agttat	gaca	tctg	accat	gttg	gagggt	gtcatt	gtgtg	gg	tcccc	ctgc	1200
acctc	agag	t	gatccgag	ccat	catcaa	caag	ataaat	atga	aaggacc	1250	
tgtgt	gttgc	t	atggaa	acc	acagaga	aca	gtccc	gtgac	attcgc	gcac	1300
ttcc	ctgag	acact	gttga	gcaga	aggca	gaaag	cgtgg	gcaga	attat	1350	
gcctc	acacg	gagg	cccgga	tcat	gaacat	ggagg	gcagg	acg	ctgg	geaa	1400
agctg	aaac	gcccc	gggag	ctgtg	catcc	gagggt	actg	cgtc	atgtgtg	1450	
ggct	actggg	gtgag	ccctca	gaag	acagag	gaag	cagtg	atc	agg	acaa	1500
gtgg	tattgg	acagg	agatg	tcgcc	acaat	gaat	gagcag	ggc	tcttgc	1550	
agat	cgtggg	ccgct	ctaag	gatat	gatca	tccggg	gtgg	tgaga	aacatc	1600	
tac	ccccgc	agct	cgagga	ctt	ctttcac	acac	acccga	agg	tg	cagga	1650
agtg	cagggtg	gtggg	agtg	agga	cgatcg	gatggg	ggaa	gag	attt	tgtg	1700
cctg	cattcg	gctga	aggac	gggg	aggaga	ccac	ggtgga	ggag	ataaaa	1750	
gctt	tctgca	aagg	gaagat	ctct	cacttc	aagatt	ccga	agt	acat	ctgt	1800
gttt	gtcaca	aact	accccc	tcacc	atctc	agg	aaagatc	caga	aaattca	1850	
aact	tcgaga	gcag	atggaa	cgac	atctaa	atctg	tgaat	aaag	cagcag	1900	
gcctg	tctcg	gc	cggttgc	ttga	ctctct	cctgtg	acaa	tg	caacctg	1950	
ctttat	gcac	ctag	atgtgc	ccag	caccca	gttctg	agcc	aggc	acatca	2000	

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
 aactgcgctg ggcacaaggt gccaaaaggc aggagcctg cccaggccct 2100
 cccctcctgc catccccac attccctgt ctgtcctgt gatttggcat 2150
 aaagagcttc tgttttcttt gaaaaaaaaa aaaaaa 2187

<210> 194
 <211> 615
 <212> PRT
 <213> Homo sapiens

<400> 194
 Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala
 1 5 10 15
 Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
 20 25 30
 Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
 35 40 45
 Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
 50 55 60
 Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
 65 70 75
 Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
 80 85 90
 Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
 95 100 105
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
 110 115 120
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
 125 130 135
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
 140 145 150
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
 155 160 165
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
 170 175 180
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
 185 190 195
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
 200 205 210
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
 215 220 225
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
 230 235 240
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

					245					250					255
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro	
				260					265					270	
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn	
				275					280					285	
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln	
				290					295					300	
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser	
				305					310					315	
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile	
				320					325					330	
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile	
				335					340					345	
Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe	
				350					355					360	
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser	
				365					370					375	
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu	
				380					385					390	
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val	
				395					400					405	
Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His	
				410					415					420	
Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg	
				425					430					435	
Ile	Met	Pro	His	Thr	Glu	Ala	Arg	Ile	Met	Asn	Met	Glu	Ala	Gly	
				440					445					450	
Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly	
				455					460					465	
Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu	
				470					475					480	
Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala	
				485					490					495	
Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys	
				500					505					510	
Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu	
				515					520					525	
Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val	
				530					535					540	
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys	
				545					550					555	
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys	

	560		565		570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr					
	575		580		585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile					
	590		595		600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu					
	605		610		615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgctgaa actgcatgag aagacaccag 50
 agcagttgag gatgatctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccacc tcactctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtcct 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggagcgt ggcaaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtgtt attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg cccaggccat 50
 gatctggact gcaggctggc tgctgtgtgt gctgcttcgc ggaggagcgc 100
 aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgtctc 150
 ccgaacaaga tgaagacagt gaagtgcgcg cggggcgtg acgtctgcac 200
 cgaggccgtg ggggcggtg agaccatcca cggacaattc tcgctggcag 250
 tgccggggtg cggttcggga ctccccggca agaatagacc cgectggat 300
 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgcccc aacggcgctgg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgcca gggatcacgc ccgcgggtcg tagctgcta 500
 caacgccagc gatcatgtct acaagggctg cttcgacggc aacgtcacct 550
 tgacggcgagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcaactcgga tggagtaaca ggcccagggt tcacgctcag 650
 tggctcctgt tgccaggggt cccgctgtaa ctctgacctc cgcaacaaga 700
 cctactcttc cctctgaatc ccaccccttg tccggctgcc ccctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgggccc 800
 agtgagaccc acatccacca ccaaacccat gccagcgcca accagttaga 850
 ctccgagaca gggagtagaa cacgaggcct ccggggatga ggagcccagg 900
 ttgactggag gcgcccgtgg ccaccaggac cgcagcaatt cagggcagta 950
 tcctgcaaaa gggggggccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgccta 1050
 ctgtgagctt ctccacctgg aaatttccct ctacactact tctctggccc 1100
 tgggtacccc tcttctcatc acttctgtt cccaccactg gactgggctg 1150
 gccagcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgtcta gctttttgag gacagctcct gtatccttct catcctgtgc 1300
 tctccgcttg tctcttctgt atgttaggac agagttagag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctoc 1400
 tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450
 ctctaagcac tgccctccct actcccgcga tctttgggga atcggttccc 1500
 catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
 ccaattcgcc ctatagtga tgta 1575

<210> 197
 <211> 346
 <212> PRT
 <213> Homo sapiens

<400> 197
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr
 1 5 10 15
 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
 20 25 30
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

[illegible]

Leu

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
 cgggactcgg cgggctcctcc tgggagtctc ggaggggacc ggctgtgcag 50
 acgccatgga gttggtgctg gtcttctctc gcagcctgct ggcccccattg 100
 gtctcggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttgcct gtggtcctct 200
 tctcgtttgg gatcctcctt atcctaagtc gcagggtgcaa gtgcagtttc 250
 aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
 catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcaggtagg aagcctctgg aacctgaggc ggctgcttga acctttggat 400
 gcaaattgctg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacaac 500
 cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggtcctgc ccacctccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaactgtg gtctttgttg ctactgtttt gtggatggta 650
 ttgtgtttgt tagtgaaatg tggactcgct tcccaggca ggggtgtagc 700
 cacatggcca tctgctctc cctgcccccg tggccctcca tcaccttetg 750
 ctctaggagg gctgcttggt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtaagagca cgggcagtgg tcttcagtcg tcttgggacc 850
 tgggaagggtt tgcagcactt tgtcatcatt cttcatggac tcctttcaact 900
 cctttaacaa aaacottgct tccttatccc acctgatccc agtctgaagg 950
 tctcttagca actggagata caaagcaagg agctggtagg cccagcgttg 1000
 acgtcaggca ggctatgcc ttcctgtggt aatttcttcc caggggcttc 1050
 caccaggagt ccccatctgc cccgcccctt cacagagcgc ccggggattc 1100
 caggcccagg gcttctactc tggccctggg gaatgtgtcc cctgcataac 1150
 ttctcagcaa taactccatg ggctctggga cctacacctc tccaaccttc 1200
 cctgtctctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtccctgc aattgggtct ctggcaggca atagttgaag gactcctggt 1300
 ccgttggggc cagcacaccg ggatggatg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccctc tagatgggca gcagaggcaa ctcccgcatac 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttggaga 1450
 ctcagcagcgc tccgtgcagc ccttggaac agtgagaggt tgaaggtcat 1500
 aacgagagtg ggaactcaac ccagatcccg ccctcctgt cctctgtgtt 1550
 cccgcggaaa ccaacaaac cgtgcgctgt gaccattgc tgttctctgt 1600
 atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatccttt 1650
 gtttct 1657

<210> 199
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 199
 Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met 15
 1 5 10
 Val Leu Ala Ser Ala Glu Lys Glu Lys Glu Met Asp Pro Phe 30
 20 25
 His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala 45
 35 40
 Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg 60
 50 55
 Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu 75
 65 70
 Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro 90
 80 85
 Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp 105
 95 100
 Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala 120
 110 115

<210> 200
 <211> 415
 <212> DNA
 <213> Homo sapiens

<400> 200
 aaacttgacg coatgaagat cccggctcct cctgcctggtg tgctcctctc 50
 cctcctgggt ctccactctg ccaggaggc caccctgggt ggtcctgagg 100
 aagaaagcac cattgagaat tatgcgtcac gaoccgaggc ctttaacacc 150
 ccgttcctga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
 cctgaactgg caogccctct ttgagtctat caaaaggaaa cttcctttcc 250
 tcaactggga tgcccttct aagctgaaag gactgaggag cgcaactcct 300
 gatgccaggt gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
 tgattotcaa cctaccataa ctctttctct cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggtggagatt gcctttgcct cagtgtattct cacctgcctc tcccttctgg 100

cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200

atgagagtgt ttttgtgtaa agtatTTTTT agaatactgt tgacttcttc 250

atgatttaat aaccatcctt tgccaagtgt tatgaggctt taggggaagt 300

tcaaccctca aatttttggt atactagatg gcttcattt acccaccact 350

attttaaggt ccctttatgt ttagggtcaa ggttcatttg acttgagaaa 400

gtgccctctt gcagcttcat tgattttggt tatcttcaat attaatgtga 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtagtgt atcccacaaa tgtgattgtt 550

aatttaaatg ttattctaat attagtacat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650

atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagggtggg ctagctgcc 50
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg cagggccgcc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcata gaagaggatc taactccttt ccgaggagcg atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300
 actaagaaca gactgtaccg ggaaatgac tgcattgttc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttgaagt gatcgggctg ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctcagggttc taaatggatg 450
 gagcctgccca tccagtcctt ctccctcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttggc cattttggga agggggacct gctgtttggc 550
 caatttatcc tacaggctctt ggaagggtgg acctcttcag agaagatctg 600
 gtaaggctcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 tttccgagga tcaaggacaa gtccagaacg agatcctctc attctctctg 700
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaaagatac cttaggaaag coagctgcta aggatgtcca 800
 tcttggtgat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850
 ctgcaagttt cgggtttaaa cactctcttc tgtgtggctc acttgtttct 900
 catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atccagtcga aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct ctttgtggca acagatctca 1250
 gatatctac ggtgagaagc ttaccataag cttgctcct ataccttgaa 1300
 tatctgctat caagccaaat acctggtttt ccttatcatg ctgcaccag 1350
 agcaactctt gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaaccaac tctaccttct attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccctttgtcc cattatttgg agcagaaaaa tegtatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca agcgctgac 1650
 tctgtcactt tattttaatg taggaaaccc tatggggttt atgaaaaata 1700
 cttggggatc attctctgaa tggctaaagg aagcggtagc catgccatgc 1750
 aatgatgtag gaggttcttt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattgatt tcaggttccc tttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390
Glu Leu			

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
 caccacctca tttctcgcca tggccctctg actgctcttg atccctgctg 50
 ccctcgccctc tttcctcttg gccctttggca ccggagtggg gttcgtgctg 100
 ttacctccc ttccggccact tcttgagggt atcccgaggt ctggtggtcc 150
 ggcagcccg cagggtatgg tggctgcctt gcaggaccgc agcctccttg 200
 cccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
 agcctcatgg cagctgaaa agtgaaggca tggacatccc ggtacttttg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350
 tgggtgatgc gtactgggag ccataacca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc cactggggtg ccgctcctct gctttgtgct 450
 ccatgtcatc tcctggctcc tcactcttag catcctcttc gtctttgact 500
 atgtgatgct catgggctc aaacagggtat actaccatgt gctggggctg 550
 ggcagagctc tggccctgaa gtctcccggt gctctcagac tctctccca 600
 cctgcgccac ccagtgtgtg tggagctgct gacagtctgt tgggtggtgc 650
 ctacctggg caccgaccgt ctctcctctg cttctcctct taccctctac 700
 ctgggcctgg ctccgggctt tgatcagcaa gacctccgt acctccgggc 750
 ccagctacaa agaaaactcc acctgctctc tcggccccag gatggggagg 800
 cagagtgagg agctcactct ggttacaago cctgttcttc ctctccact 850
 gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900
 caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950
 ctctgggttc agctccatac cctaaattct gagtttcagc cactgaactc 1000
 caaggtccac ttctaccag caaggaagag tggggtatgg aagtcatctg 1050
 tccttctact gtttagagca tgacctctc cccctcaaca gcctcctgag 1100
 aaggaaagga tctgccctga ccaactccct ggcaactgta cttgcctctg 1150
 cgctccaggg gtccctttct gcaccgttgg cttccactcc aagaagggtg 1200
 accagggtct gcaagttcaa cgggtcatagc tgtccctcca ggcccccaacc 1250
 ttgcctcacc actccgggc ctagtctctg caactcctta ggccctgcct 1300
 ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350
 atgaettggg gctccctgct ctcccgagga agatgctctg caggaaaata 1400
 aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe	
1				5				10					15	
Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
				65				70					75	
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

cogagcacag gagattgcct gcgttttaga ggtggctgcg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tcttttttct tgttttcaga 100
gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcctct ggaattccac agttttctta 200
gtccctctga ccoggttgac ctgttggtct tcccgctgg ctgctctatc 250
acgtgggtgt ctccgaactac tcaccccgag tgtaaagaac ettcgggtcg 300
cgtgcttctg agctgctgtg gatggcctog gctctctgga ctgtccttcc 350
gagtaggatg tcactgagat ccctcaaatg gagcctcctg ctgctgtcac 400
tcttgagttt ctttgtgatg tggtaacctca gccttcccca ctacaatgtg 450
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaatgc tctcatcaaa 550
atocatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac accttcttta tggtgacata 750
atccgacaga attttttaga cacatataat aacctgacct tgaaaacat 800
tatggcattc aggtgggtaa ctgagttttg ccccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcacataa ctggcaattt agtgaagtat 900
cttttaaacc taaaccactc agagaagttt ttcacaggtt atcctctaata 950
tgataattat tctatagag gattttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaaggtg ttccttccat actgcagtggt gttgggttat 1050
ataatgtcca gagatttggg gcccaaggatc tatgaaatga tgggtcacgt 1100
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150
taaaagtga cattcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatg 1250
cttttcttcc aaggagatca tcactttttg gcaggtcatt ctaaggaaca 1300
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350
ataccttggt gaaagtgtta aataaagtag gtactgtgga aaattcatg 1400
ggaggctcgt gtgctggctt acactgaact gaaactcatg aaaaacccag 1450
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatattgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
 gaaattaata ggaccaacaa atttggacat gtcattctgt agactagaat 1600
 ttcttaaaag ggtgttactg agttataagc tcaactaggct gtaaaaacaa 1650
 aacaatgtag agttttattt attgaacaat gtagtcactt gaaggttttg 1700
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaatattt 2050
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu	1	5	10	15
Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe	20	25	30	
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu	35	40	45	
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg	50	55	60	
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His	65	70	75	
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp	80	85	90	
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys	95	100	105	
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln	110	115	120	
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp	125	130	135	
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp	140	145	150	
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp	155	160	165	

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp
 170 175 180

Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu
 185 190 195

Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
 200 205 210

Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
 215 220 225

Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly
 230 235 240

Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu
 245 250 255

Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val
 260 265 270

Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu
 275 280 285

Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys
 290 295 300

Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu
 305 310 315

Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
 320 325 330

Tyr

<210> 210
 <211> 745
 <212> DNA
 <213> Homo sapiens

<400> 210
 cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50
 gctggagcttc ttggagtctt tctagctcct gccctagcta actataatat 100
 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
 actctttcaa aagaagacat gcattgtgca caaaatgaag aaggaagtca 300
 tgcctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
 ggtaagggac caggaggacc acctcccaag ggcctgatgt actcagtc 400
 cccaaacaaa gtogatgacc tgagcaagtt cggaaaaaac attgcaacaa 450
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
 ctgttttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tcacgtgggt ttaccatgt cattctgaaa ttttctctca ctagttagt 700
ttgattttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu
1 5 10 15
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
155 160 165
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
catttctgaa actaatcgtg tcagaattga ctttgaaaag cattgctttt 50
tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150
tccatgtatt aaattcttat tgcctactga tttttttgag ttaagagttg 200
ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300
tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
gacagtcttc gaaccaatgt gttgttcga ttcaaccag agactatagc 400
atgtgcttgc atctaccttg cagctagagc acttcagatt ccggtgcca 450
ctcgccccca ttggtttctt ctttttggtt ctacagaaga ggaaatccag 500
gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550
tgaattactg gaaaaagaag tagaaaaaag aaaagtatgc ttacaagaag 600
ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agccctttca 650
accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700
aaaagctgaa gagaatcac caatctccat taatgtgaag acagtcaaaa 750
aagaacctga ggatagacaa caggcttcca aaagccctta caatgggtga 800
agaaaagaca gcaagagaag tagaaatagc agaagtgcga gtcgatcgag 850
gtcaagaaca cgtacacgtt ctatgcaca tactccaaga agacactata 900
ataataggcg gagtcgatct ggaacataca gctcgatgc aagaagcagg 950
tcccgcagtc acagtgaag cctcgaaga catcataatc atgggtctcc 1000
tcaccttaag gccaaacata ccagagatga tttaaaaagt tcaaacagac 1050
atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100
gatcactcag atgcagcaa gaaacacagg catgaaaggg gacatcatag 1150
ggacaggcgt gaacgatctc gctcctttga gaggtcccat aaaagcaagc 1200
accatggttg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250
cttcctttga gctgcacatc gttcttggtt ttgcctatct acagtgtgat 1300
gtatggactc aatcaaaaac attaaacgca aactgattag gattttgatt 1350
cttgaaacct tctaggtctc tagaacactg aggacagttt cttttgaaaa 1400
gaactatggt aatttttttg cacattaaaa tgccttagca gtatctaatt 1450
aaaaaccatg gtcagggtca attgtacttt attatagttg tgtattgttt 1500
attgtcataa gaaactggagc gtgaattctg taaaaatgta tcttattttt 1550
atacagataa aattgcagac actgttctat ttaagtgttt attttgttaa 1600
atgatgggtg atactttctt aacactgggt tgtctgcgat tgtaaagatt 1650
tttacaagga aataaaatc aaatcttggt ttttctaaaa aaaaaaaaaa 1700

aaaagt 1706

<210> 213
<211> 299
<212> PRT
<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro	
1				5					10					15	
Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu	
				20					25					30	
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly	
				35					40					45	
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg	
				50					55					60	
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu	
				65					70					75	
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala	
				80					85					90	
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly	
				95					100					105	
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys	
				110					115					120	
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys	
				125					130					135	
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn	
				140					145					150	
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala	
				155					160					165	
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr	
				170					175					180	
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr	
				185					190					195	
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro	
				200					205					210	
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His	
				215					220					225	
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg	
				230					235					240	
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser	
				245					250					255	
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp	
				260					265					270	
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys	

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

tggggataaa ggaaaaatgg tcagggtatta atggcttaaa gattattgga 50

aggggtttat cattttttga anntattcgg gtcanaattg nctttgaaaa 100

gcattgcttt ttacagaaat atattanctt tttagagtaa tttctagttt 150

ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200

tcgcataatg tcctagtatt aaattnttat tgcttactga tttttttgag 250

ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300

agaaaaaaga ataaagtaga ttgagtcctc aatttttatg aagcttcaga 350

agaaactggtt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400

ttacatgaat gacagtcctc gaaccaatgt gtttgcttga tttcaaccag 450

agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500

cogttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550

ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600

agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650

ttacaagaag conaattaaa agcaaaggga ttgaatccgg atggaactcc 700

agcccttcca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

gacacgagggc ctogtgbcaa gcttggcagc aggggtgcaac gcgttctcgc 50

acgcgtcatg gcggctcctcg gactacagct ggtggtgacc ctgctcactg 100

ccacctcatg gcacaggctg gcgccacact gctccttcgc gcgctggctg 150

ctctgtaacg gcagtttggtt ccgatacaag caccgctctg aggaggagct 200

tcgggcccctg gcggggaagc cgaggcccgagg aggcaggaaa gagcggtggg 250

ccaatggcct tagtgaggag aagccaactgt ctgtgccccg agatgccccg 300

ttccagctgg agacctgccc cctcacgacc gtggatgccc tggctcctgcg 350
 cttcttctcg gagtaccagt ggtttgtgga ctttgcctgt tactcgggcg 400
 gcgtgtacct cttcacagag gcctactact acatgctggg accagccaag 450
 gagactaaca ttgctgtgtt ctggtgccgt ctcacggtaga ctttctccat 500
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggaggggg 550
 gtgagcgctc tgtctgcctc acctttgcct tctcttctct gctgctggcc 600
 atgctggtgc aagtgggtgc ggaggagacc ctcgagctgg gcctggagcc 650
 tggctctggc agcatgaccc agaacttaga gccacttctg aagaagcagg 700
 gctgggactg ggcgcttctc gtggccaagg tggctatccg cgtgggactg 750
 gcagtgtgtg gctctgtgct gggtgcttc ctcaccttc caggcctgcg 800
 gctggcccag acccaccggg acgcaactgac catgtcggag gacagaccca 850
 tgctgcagtt cctcctgcac accagcttcc tgtctccctt gttcatcctg 900
 tggctctgga caaagcccat tgcacgggac ttctgcacc agccgcccgt 950
 tggggagacg cgtttctccc tgctgtccga ttctgccttc gactctgggc 1000
 gccctctggt gctgggtgtg ctgtgcctgc tgcggtctgg ggtgaccggg 1050
 cccaccctgc aggcctacct gtgcctggcc aaggcccggg tgagcagct 1100
 gcgaaggag gctggccgca tcgaagcccg tgaatccag cagagggtgg 1150
 tccgagtcta ctgctatgtg accgtggtga gcttgcagta cctgacgccc 1200
 ctcactccca cctcaactg cacacttctg ctcaagacgc tgggaggcta 1250
 ttctgggggc ctgggccag ctctctact atccccgac ccatcctcag 1300
 ccagcgctgc ccccatcggc tctggggagg acgaagtcca gcagactgca 1350
 gcgcggattg ccggggccct ggggtggcctg ctactcccc tcttctccg 1400
 tggcgctctg gctacctca tctggtggac ggctgcctgc cagctgctcg 1450
 ccagcctttt cggcctctac ttccaccagc acttgccagg ctctagctg 1500
 cctgcagacc ctctggggc cctgaggtct gttctctggg cagcgggaca 1550
 ctgacctgcc cctctgttt gcgccccgt gtccccagct gcaaggtggg 1600
 gccgactcc ccggcgcttc cttcaccaca gtgcctgacc cgcggccccc 1650
 cttggacgcc gagtttctgc ctcagaactg tctctcctgg gccacgacg 1700
 atgagggtcc cgaggccatt gtctccgaag cgtatgtgcc aggtttgagt 1750
 ggcgagggtg atgctggctg ctcttctgaa caaataaagg agcatgccga 1800
 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala
1				5						10				15
Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp
				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80						85				90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

	290		295		300
Thr Arg Phe Ser	Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly	Arg		
	305		310		315
Leu Trp Leu Leu	Val Val Leu Cys Leu	Leu Arg Leu Ala Val	Thr		
	320		325		330
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg	Val		
	335		340		345
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu	Ile		
	350		355		360
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val	Ser		
	365		370		375
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr	Leu		
	380		385		390
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro	Ala		
	395		400		405
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro	Ile		
	410		415		420
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile	Ala		
	425		430		435
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly	Val		
	440		445		450
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu	Ala		
	455		460		465
Ser Leu Phe Gly	Leu Tyr Phe His Gln	His Leu Ala Gly Ser			
	470		475		

<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
 cgttngcaac cgtcaatggc ggtcctcgga gtacagctgg tggtagacct 50
 gctcactgcc accctcatgc acaggtggc gccacactgc tcttctcggc 100
 gctggtgct ctgtaacggc agttgttcc gatacaagca cccgtnttga 150
 ggaggagctt cgggccctgg cggggaagcc gaggccaga ggcaggaaag 200
 agcgtgtggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgccct 300
 ggtcctgcgc ttcttctcgt agtaccagtg gttgtggac tttgctgtgt 350

actcggggcg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaag agactaacat tgctgtgttc tgggtgcctgc tcacagtgc 450
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttctg 550
ctgctggcca tgcgtgtgca agcg 574

<210> 218
<211> 2571
<212> DNA
<213> Homo sapiens

<400> 218
ggttcctaca tctctctatc tgagatcag agagcataat cttcttacgg 50
gcccgtgatt tattaacgtg gcttaatctg aaggtttcca gtcaaattct 100
ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctggtttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200
cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggtc 250
cagtctctgc aactacattg acaatgtggg caacctgcac ttcctgtatt 300
cagaactctg taaagggtgc tccactacg gcctgaccaa agataggaa 350
aggcgctcac aagatggctg tcacagcggc tgtgcgagcc tcacagccac 400
ggctccctcc ccagaggttt ctgcagctgc caccatctcc ttaatgcag 450
acgagcctgg cctagacaa cctgcctacg tgcctcggc agaggacggg 500
cagccagcaa tcagccaggt ggaactctggc cggagcaacc gaactagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgccctga 700
agtctttcca aggttgtacc acctgattcc agatggtgaa attaccagca 750
tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctgggtg 800
ggaggtagcg aaacccact ggtccatctc attatccaa acatttatcg 850
tgatgggggt atcgccagag acggccggct actgccagga gacatcattc 900
taaaggtaaa cgggatggac atcagcaatg tccctcaca ctacgctgtg 950
cgtctctctc ggcagccctg ccagggtctg tggctgactg tgatgcgtga 1000
acagaagttc cgcagcagga acaatggaca ggccccggat gcctacagac 1050
cccagatga cagcttctat gtgattctca acaaaagtag ccccaggag 1100
cagcttgtaa taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150
cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250
 ccagaaagtg cggctcatct gattcaggcc agtgaagac gtgttcacct 1300
 cgtcgtgtcc cgccagggtc ggagcggag cctgacatc ttgcaggag 1350
 ccggtctgaa cagcaatggc agctgggtccc cagggccagg ggagaggagc 1400
 aacactccca agcccctcca tcctacaatt acttgatcat agaaggtggt 1450
 aaatatccaa aaagaccccg gtgaatctct cggcatgacc gtgcaggagg 1500
 gagcatcaca tagagaatgg gatttgccta tctatgtcat cagtgttgag 1550
 cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
 gttgaatgtg gatggggtcg aactgacaga ggtcagccgg agtgaggcag 1650
 tggcattatt gaaaaaaca tcactctcga tagtactcaa agccttggaa 1700
 gtcaaagagt atgagcccca ggaagactgc agcagcccg cagccctgga 1750
 ctccaaccac aacatggccc caccagtgga ctgggtccca tcctgggtca 1800
 tgtggtcgga attaccacgg tgcttgata actgtaaga tattgtatta 1850
 cgaagaaaca cagctggaag tctgggcttc tgcatgtag gaggttatga 1900
 agaatacaat ggaacaaac cttttttcat caaatccatt gttgaaggaa 1950
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000
 gtcaatggta gaagtacatc aggaatgata catgcttgct tgcaagact 2050
 gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100
 gcactttttt atagaatcaa tgatgggtca gaggaaca gaaaaatcac 2150
 aaataggcta agaagttgaa aactatatt tatcttgta gtttttatat 2200
 ttaaagaaag aatacattgt aaaaatgtca ggaaggtat gatcatctaa 2250
 tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300
 ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350
 atattttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
 tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450
 ctgaagtctg coaagggtac attatggcca tttttaattt acagctaaaa 2500
 tatttttttaaatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550
 aaatattttt cagaagttaa a 2571

<210> 219
 <211> 632
 <212> PRT
 <213> Homo sapiens

<400> 219
 Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

1	5	10	15
Asn Tyr Ile Asp	Asn Val Gly	Asn Leu His Phe Leu Tyr Ser	Glu 30
	20	25	
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys 45
	35	40	
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu Thr	60
	50	55	
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Thr Ile Ser	75
	65	70	
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val Ser	90
	80	85	
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser Gly	105
	95	100	
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr Ile	120
	110	115	
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val Leu	135
	125	130	
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp Gln	150
	140	145	
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe Pro	165
	155	160	
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile Lys	180
	170	175	
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu Val	195
	185	190	
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His Ile	210
	200	205	
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro Gly	225
	215	220	
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val Pro	240
	230	235	
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val Leu	255
	245	250	
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn Asn	270
	260	265	
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe His	285
	275	280	
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile Lys	300
	290	295	
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn Val	315
	305	310	
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu Asn	

320	325	330
Asp Arg Val Leu Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser	
335	340	345
Pro Glu Ser Ala Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val	
350	355	360
His Leu Val Val Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile	
365	370	375
Phe Gln Glu Ala Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly	
380	385	390
Pro Gly Glu Arg Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile	
395	400	405
Thr Cys His Glu Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu	
410	415	420
Ser Leu Gly Met Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp	
425	430	435
Asp Leu Pro Ile Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile	
440	445	450
Ser Arg Asp Gly Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val	
455	460	465
Asp Gly Val Glu Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala	
470	475	480
Leu Leu Lys Arg Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu	
485	490	495
Val Lys Glu Tyr Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala	
500	505	510
Leu Asp Ser Asn His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro	
515	520	525
Ser Trp Val Met Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys	
530	535	540
Lys Asp Ile Val Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe	
545	550	555
Cys Ile Val Gly Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe	
560	565	570
Phe Ile Lys Ser Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly	
575	580	585
Arg Ile Arg Cys Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser	
590	595	600
Thr Ser Gly Met Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu	
605	610	615
Leu Lys Gly Arg Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr	
620	625	630
Phe Leu		

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttctcttc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatacagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcggttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccagggtgc tctcccgaa agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaacacag 400
 ctctgggaca catgtttctc aacaaataca cctgggtcaa gtacaacct 450
 ctggagtctc tgatcaaaaga cgtggattgg ttctgtcttg ggtcacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgcggtgct ggaggctgtg caaaggctgg gctctggggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaatataa ttctttccca atgccccaac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

ggccatcagc gtgcactgtt cgtatttgga gttcatgcaa aatgagtgtg 950

ttttgctgc ttttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met	Gly	Leu	Pro	Gly	Leu	Phe	Cys	Leu	Ala	Val	Leu	Ala	Ala	Ser
1				5					10					15
Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser
			20						25					30
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val
			35						40					45
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Ile	Thr	Tyr	
			50						55					60
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val
			65						70					75
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys
			80						85					90
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr
			95						100					105
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu
			110						115					120
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu
			125						130					135
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala
			140						145					150
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp
			155						160					165
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala
			170						175					180
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys
			185						190					195
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val
			200						205					210
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro
			215						220					225
Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
			230						235					240
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
			245						250					255
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met					
			260						265					

<210> 224
<211> 1297
<212> DNA
<213> Homo sapiens

<400> 224
ggtccttaat ggcagcagcc gccgctacca agatccttct gtgcctccc 50
cttctgtctc tgcgtgccg ctggtcccg gctggcgag ccgacctca 100
ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttactat 200
gactgtggca acaagacagt cacacctgtc agtccctgtg ggaagaaact 250
aaatgtcaca acggcctgga aagcacagaa ccagttactg agagaggtgg 300
tggacatact tacagagcaa ctgcgtgaca ttcagtgtga gaattacaca 350
cccaaggaa cctcaccct gcaggcaagg atgtcttgtg agcagaaagc 400
tgaaaggacac agcagtggat cttggcagtt cagtttcgat gggcagatct 450
tcctcctctt tgactcagag aagagaatgt ggacaacggt tcctcctgga 500
gccagaaaga tgaaagaaaa gtgggagaat gacaagggtg tgcccatgtc 550
cttccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
atgtcctcag gcacaacca actcagggcc acagccacca cctcatctct 700
ttgctgctc ctcctcatcc tccctgctt catcctcctt ggcatctgag 750
gagagtctt tagagtgaca ggttaaagct gataccaaa ggcctcctgtg 800
agcacggtct tgatcaaact cgcctctctg totggccagc tgcccaagac 850
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
ccaatagctc attcactgcc ttgattcctt ttgccaacaa tttaccagc 950
agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
ttcctgcact taaagtctg gctgactaaa caagatatat cattttcttt 1050
cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100
tcttgcaaat gatattgtca gtaaaaaat cacgttagac ttcagacctc 1150
tggggattct ttccgtgtcc tgaaagagaa tttttaaat atttaataag 1200
aaaaaattta tattaatgat tgtttccttt agtaatttat tgttctgtac 1250
tgatatttaa ataaagagtt ctatttccca aaaaaaaaa aaaaaaa 1297

<210> 225
<211> 246
<212> PRT
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
1 5 10 15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
20 25 30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
35 40 45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
50 55 60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
65 70 75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
80 85 90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
95 100 105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110 115 120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125 130 135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140 145 150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155 160 165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170 175 180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185 190 195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200 205 210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215 220 225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
230 235 240
Phe Ile Leu Pro Gly Ile
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaaac coactctatac aaactatata ttttcatttc 50
tgctgctagc tgcttgggc ctcacaattt tcattctgtt ttctgacttt 100
caagttatat accgtggaat ggagttgatc ccaaccataa catogtgagg 150

gggtttaatt ttggtggtag cctcaccoca attctgggtg ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctggt gatcaaaaga 250
 gaatttgat tctactctaa aagtoaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcagggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttaccttttc tctctccatt caagcattca aagtatat ttcaatgaatt 600
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaa aaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
 gttctctttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50
 cacacatga agctcttggg gcaggttaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacotcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gctcagccg ggcacagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgcggggg 250
 cctctccagag gtcccgagg gtattccctc gaacaccccg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400
 ggtggggggc ttaacgggc tggccagcct caacaccctg gagctgttgc 450
 acaactggct gacagtcatc cctagcgggg cctttgaata cctgtccaag 500
 ctgcggggagc tctggcttgc caacaacccc atcgaaagca tcccctctta 550
 cgccttcaac cgggtgcctc cctcatgcg cctggacttg ggggagctca 600
 agaagctgga gtatatctct gaggggagctt ttgaggggct gtccaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 cccccgttg gggctggagg agctggagat gtcagggaac cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcataaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
 ggcttcactt gtggaactca acttggccca caataacctc tcttctttgc 900
 cccatgacct ctttaccocg ctgaggtacc tgggtgagtt gcatctacac 950
 cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000
 tcgagagtat ataccacca attccacctg ctgtggccgc tgtcatgctc 1050
 ccatgcacat gcgagccgc tacctcgtgg aggtggacca ggccctcttc 1100
 cagtgtcttg ccccttcat catggacgca cctcgagacc tcaacatttc 1150
 tgaggggtcg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200
 tgaagtgtgt gctgccaat gggacagtgc tcagccacgc ctcccgccac 1250
 ccaaggtatc ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300
 gctttcagac actggggtgt acacatgcat ggtgaccaat gttgcaggca 1350
 actccaacgc ctgcgcctac ctcaatgtga gcaaggctga gcttaacacc 1400
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
 gcctgaggac acaacgcgaa agtacaagcc tgttctctacc acgtccactg 1500
 gttaccagcc ggcatatacc acctctacca cggtgctcat tcagactacc 1550
 cgtgtgccca agcaggtggc agtaccocgc acagacacca ctgacaagat 1600
 gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650
 gctttgtggc agtgactctg ctactgcgc ccatgttgat tgtctcttat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750
 tgttgagata atccaggtgg acgaagacat cccagcagca acatcccgag 1800
 cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgtg 1850
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcttggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga ccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttcttgtata tgcttatata ttaagtctat gggctgggta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn
1				5					10					15
Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile
				20					25					30
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn
				35					40					45
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val
				50					55					60
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser
				65					70					75
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile
				80					85					90
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln
				95					100					105
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn
				110					115					120
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu
				125					130					135
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg
				140					145					150
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr
				155					160					165
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu
				170					175					180
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu

185	190	195
Phe Asn Leu Lys Tyr Leu Asn Leu Gly	Met Cys Asn Ile Lys Asp	
200	205	210
Met Pro Asn Leu Thr Pro Leu Val Gly	Leu Glu Glu Leu Glu Met	
215	220	225
Ser Gly Asn His Phe Pro Glu Ile Arg	Pro Gly Ser Phe His Gly	
230	235	240
Leu Ser Ser Leu Lys Lys Leu Trp Val	Met Asn Ser Gln Val Ser	
245	250	255
Leu Ile Glu Arg Asn Ala Phe Asp Gly	Leu Ala Ser Leu Val Glu	
260	265	270
Leu Asn Leu Ala His Asn Asn Leu Ser	Ser Leu Pro His Asp Leu	
275	280	285
Phe Thr Pro Leu Arg Tyr Leu Val Glu	Leu His Leu His His Asn	
290	295	300
Pro Trp Asn Cys Asp Cys Asp Ile Leu	Trp Leu Ala Trp Trp Leu	
305	310	315
Arg Glu Tyr Ile Pro Thr Asn Ser Thr	Cys Cys Gly Arg Cys His	
320	325	330
Ala Pro Met His Met Arg Gly Arg Tyr	Leu Val Glu Val Asp Gln	
335	340	345
Ala Ser Phe Gln Cys Ser Ala Pro Phe	Ile Met Asp Ala Pro Arg	
350	355	360
Asp Leu Asn Ile Ser Glu Gly Arg Met	Ala Glu Leu Lys Cys Arg	
365	370	375
Thr Pro Pro Met Ser Ser Val Lys Trp	Leu Leu Pro Asn Gly Thr	
380	385	390
Val Leu Ser His Ala Ser Arg His Pro	Arg Ile Ser Val Leu Asn	
395	400	405
Asp Gly Thr Leu Asn Phe Ser His Val	Leu Leu Ser Asp Thr Gly	
410	415	420
Val Tyr Thr Cys Met Val Thr Asn Val	Ala Gly Asn Ser Asn Ala	
425	430	435
Ser Ala Tyr Leu Asn Val Ser Thr Ala	Glu Leu Asn Thr Ser Asn	
440	445	450
Tyr Ser Phe Phe Thr Thr Val Thr Val	Glu Thr Thr Glu Ile Ser	
455	460	465
Pro Glu Asp Thr Thr Arg Lys Tyr Lys	Pro Val Pro Thr Thr Ser	
470	475	480
Thr Gly Tyr Gln Pro Ala Tyr Thr Thr	Ser Thr Thr Val Leu Ile	
485	490	495
Gln Thr Thr Arg Val Pro Lys Gln Val	Ala Val Pro Ala Thr Asp	

Thr Thr Asp Lys	Met Gln Thr Ser Leu Asp Glu Val Met Lys Thr	500	505	510
	515	520		525
Thr Lys Ile Ile	Ile Gly Cys Phe Val Ala Val Thr Leu Leu Ala	530	535	540
Ala Ala Met Leu	Ile Val Phe Tyr Lys Leu Arg Lys Arg His Gln	545	550	555
Gln Arg Ser Thr	Val Thr Ala Ala Arg Thr Val Glu Ile Ile Gln	560	565	570
Val Asp Glu Asp	Ile Pro Ala Ala Thr Ser Ala Ala Ala Thr Ala	575	580	585
Ala Pro Ser Gly	Val Ser Gly Glu Gly Ala Val Val Leu Pro Thr	590	595	600
Ile His Asp His	Ile Asn Tyr Asn Thr Tyr Lys Pro Ala His Gly	605	610	615
Ala His Trp Thr	Glu Asn Ser Leu Gly Asn Ser Leu His Pro Thr	620	625	630
Val Thr Thr Ile	Ser Glu Pro Tyr Ile Ile Gln Thr His Thr Lys	635	640	645
Asp Lys Val Gln	Glu Thr Gln Ile	650		

<210> 230
 <211> 2846
 <212> DNA
 <213> Homo sapiens

<400> 230
 cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50
 tggggctcac ttttcttcag ctcttctca tctcgtcctt gccaaagagag 100
 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagatgc tgtgaatatg atcagattga gtgcgtctgc ccgggaaaga 200
 gggaagtctg gggttatacc atccccttgc gcaggaaatga ggagaatgag 250
 tgtgactcct gcctgatcca ccaggttgt accatctttg aaaactgcaa 300
 gagctgcgca aatggctcat gggggggtac cttggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400
 atgcgagtgt gccaggttct gcgagcccca aagggtcaga ttttgttga 450
 aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
 atgtgcagat atgactatgt tgaggttctg gatggagaca accgcgatgg 600
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcaactccac gtctctcttcc actccgatgg ctccaagaat 700
 tttagcaggtt tccatgccat ttatgaggag atcacagcat gctctcctc 750
 cccttggttc catgaacggca cgtgcgtcct tgacaaggct ggaatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgctgtga aaatctcctt 850
 gaagaaagaa actgtcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggccctgggc ttatcaacgg acgccatgct aaaattggca 950
 ccgtggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcagggaac agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctgggt agaaggagag 1100
 ttcttcctgag gcaggttcag tcaagggaga caccattaca ccagctatac 1150
 tcagcggtct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200
 agcccttccc ttggagatc tgcccatggg ataccaacat ctgcataccc 1250
 agctccagta tgagtgcac tcacccttct accgccgctt gggcagcagc 1300
 aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350
 catccctatc tgccgggaaaa ttgagaacat cactgctcca aagaccacag 1400
 ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcgggggtg 1450
 catgacggca gccctacaaa gggagcgtgg ttctagtct gcagcgtgac 1500
 cctggtgaat gaggcactg tggtggtggc tgcccactgt gttactgacc 1550
 tggggaaggt caccatgac aagacagcag acctgaaagt tgttttgggg 1600
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650
 gatttctgct atcattctgc atcccaacta tgaccccatc ctgcttgatg 1700
 ctgacatcgc catcctgaag ctcttagaca agggccgtat cagcaaccga 1750
 gtccagccca tctgcctcgc tgccagtggg gatctcagca ctctctcca 1800
 ggagtcceac atcaactgtg ctggctggaa tgtctctgga gacgtgagga 1850
 gccctgctt caagaacgac acaactgcgt ctgggggtgt cagtgtggtg 1900
 gactcgtcgc tgtgtgagga gcagcatgag gaccatggca tcccagttag 1950
 tgtcactgat aacatgttct gtgccagctg ggaacccact gcccttctg 2000
 atatctgcac tgcaagaca ggaggcatcg cggctgtgtc cttccgggga 2050
 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaaggtgc 2150
 tgccttttaa agactggatt gaaagaaata tgaatgaac catgctcatg 2200
 cactccttga gaagtgttct tgtatatccg tctgtactgt tgcattgctg 2250

tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
cagggtctct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350
cattgctggt aggtgatgc cgcgtccact actaggacag ccaattggaa 2400
gatgccaggg cttgcaagaa gtaagtttct tcaagaaga ccatatacaa 2450
aacctctcca ctccactgac ctggtggtct tccccaaact tcagttatac 2500
gaatgccatc agcttgacca ggaagatct gggcttcatg agggcccttt 2550
tgaggtctc aagttctaga gagctgcctg tgggacagcc cagggcagca 2600
gagctgggat gtggtgcatg cctttgtgta catggccaca gtacagtctg 2650
gtccttttcc ttccccatct cttgtacaca ttttaataaa ataagggttg 2700
gcttctgaac tacaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn
				485					490					495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly
				500					505					510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly
				515					520					525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser
				530					535					540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile
				545					550					555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala
				560					565					570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg
				575					580					585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly
				590					595					600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp
				605					610					615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys
				620					625					630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp
				635					640					645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile
				650					655					660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly
				665					670					675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser
				680					685					690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe
				695					700					705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys
				710					715					720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gctcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgccctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
aaggagttca tggttaattt ccataagacc ctcatcttgg ggaaggga 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatgcg cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccacgg gaacagagag aaacacctga tgtacctgtc ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750
tcccaagcat ctggtggttg gcaggaaacag cactgggtac aggttacgtt 800
acagtggaata ttttgggggt gttactgccc taagcagaga gcagtttttc 850
aagggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
tgacctcaga ctcagggttg agctccaaag aatgaaaaat tccgcggccc 950
tgcttgaagt gggtaaatat acaatgtgtc tccacactag agacaaaggc 1000

aatgagggtga	acgcagaacg	gatgaagctc	ttacaccaag	tgtcacgagt	1050
ctggagaaca	gatgggttga	gtagtgtgtc	ttataaatta	gtatctgtgg	1100
aacacaatcc	tttatatatc	aacatcacag	tggatttctg	gttttggtga	1150
tgaccctcga	tcttttgggt	atgttttgaa	gaactgattc	ttgttttgca	1200
ataattttgg	cctagagact	tcaaatagta	gcacacatta	agaacctgtt	1250
acagctcatt	gttgagctga	atttttctct	ttgtattttt	cttagcagag	1300
ctcctgggtg	tgtagagtat	aaaacagttg	taacaagaca	gctttcttag	1350
tcattttgat	catgaggggt	aaatattgta	atatggatgc	ttgaaggact	1400
ttatatataa	ggatgactca	aaggataaaa	tgaacgctat	ttgaggagtc	1450
tggttggaag	agattttatt	aaatttgga	taatatatta	tgggataaaa	1500
ggccacagga	aataagactg	ctgaatgtct	gagagaacca	gagttgttct	1550
cgtccaaggt	agaaaggtag	gaagatacaa	tactgttatt	catttatctc	1600
gtacaatcat	ctgtgaagtg	gtgggtgtcg	gtgagaaggc	gtccacaaaa	1650
gaggggagaa	aaggcgacga	atcaggacac	agtgaacttg	ggaatgaaga	1700
ggtagcagga	gggtggagtg	tccgctgcaa	aggcagcagt	agctgagctg	1750
gttgacggtg	ctgatagctg	tcaggggagg	acctgccagg	gtatgccttc	1800
cagtgatgcc	caccagagaa	tacattctct	attagttttt	aaagagtttt	1850
tgtaaaatga	ttttgtacaa	gtaggatatg	aattagcagt	ttacaagttt	1900
acatattaac	taataataaa	tatgtctctc	aaataacctc	gtagtataaa	1950
gtgaaaaaac	aaaa	1964			

<210> 236

<212> PRT

<220>

<222> 1-27

 $\langle 220 \rangle$

<222> 4-7, 220-223, 335-338

 $\langle 220 \rangle$

<222> 191-201

<400> 236

1

10

15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Ly's	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
cettacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcac cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggtcgcc atcctcggtc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
cgtgggcccgg ggtgcgcag cgggctgtgg gcgcgcccgg aggagcgcacc 50
gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gcccacgct 100
tctccgcctc cgggcccgc aatggcccag gcagtggtgt cgcgcctcgg 150
ccgcacctcc tggttgctt gctctctgcc ctgggcccgg gcaggggtgg 200
ccgcagggct gtatgaactc aatctcacca cagatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggcccctg cccgctgacg cccacctcta cagcttcac tggaaccaca 350
cccgcgtggt gcttactggc aagatggaga agggtctcag ctccaccatc 400
cgtgtggtcg gccacgtgcc cggggaattc cgggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500
tccccatcac agagttcctc gtgggggacc ttgtgtcac ccagaacact 550

tcctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
 ctctctcctc caccgcccga gcaacttcct caagaccgcc ttgtttctct 650
 acagctggga ctctggggac gggaccaga ttgtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttacacctga agctcaaagt 750
 ggtggcggag tgggaagagg tggagccgga tgcacgagg gctgtgaagc 800
 agaagaccgg gaacttctcc gcctcgctga agctgcagga aacctctcga 850
 ggcatccaag tgttggggcc caccctaatt cagaccttc aaaagatgac 900
 cgtgaccttg aacttctctg ggagccctcc tctgactgtg tgcctggcgc 950
 tcaagcctga gtgcctccc ctggaggaag gggagtgcga cctgtgtcc 1000
 gtggccagca cagcgtacaa cctgaccac accttcaggc acctggggga 1050
 ctactgtctc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
 accacaagat ccaggtgtgg cctccagaa tccagccgc tgcctttgct 1150
 ttccactgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
 gacctgcgg aatgccactc agcaaaagga catggtggag aaccgggagc 1250
 caccctctgg ggtcagggtc tgcctgcaga tgcctgtgtg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gtctgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaaac ttacacctg tgagcactcc 1400
 cctcccccac cccatctcag tggttaactga ctgctgactt ggagtttcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
 cctccctctc tgtaaccctc gaaccagacc attcaccat ctgtacagtc 1600
 cagccactga cataagcccc actcggttac caccctctg acccctacc 1650
 tttagaagg ctctgtgcag gactttgatg cttgggggtg tccgtgttga 1700
 ctctagggtg ggctggctg cccactgccc attcctctca tattggcaca 1750
 tctgtctgcc attgggggtt ctcagtttcc tccccagac agccctacct 1800
 gtgccagaga gctagaaaga aggtcataaa gggttaaaaa tccataacta 1850
 aagggtgtac acatagatgg gcacactcac agagagaagt gtgcattgac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgcattctgt taagtcggtt 2000
 gctgggatgc acctgcact agagctgaaa ggaaatttga cctccaagca 2050
 gcctgacag gttctgggcc cgggcccctc ctttgtctt tgcctctgca 2100
 gttcttgcgc cctttataag gccatcctag tccctgctgg ctggcagggg 2150

Tyr Asn Tyr Ser Ile Ile Gly Thr Phe Thr Val Lys Leu Lys Val
 200 205 210
 Val Ala Glu Trp Glu Glu Val Glu Pro Asp Ala Thr Arg Ala Val
 215 220 225
 Lys Gln Lys Thr Gly Asp Phe Ser Ala Ser Leu Lys Leu Gln Glu
 230 235 240
 Thr Leu Arg Gly Ile Gln Val Leu Gly Pro Thr Leu Ile Gln Thr
 245 250 255
 Phe Gln Lys Met Thr Val Thr Leu Asn Phe Leu Gly Ser Pro Pro
 260 265 270
 Leu Thr Val Cys Trp Arg Leu Lys Pro Glu Cys Leu Pro Leu Glu
 275 280 285
 Glu Gly Glu Cys His Pro Val Ser Val Ala Ser Thr Ala Tyr Asn
 290 295 300
 Leu Thr His Thr Phe Arg Asp Pro Gly Asp Tyr Cys Phe Ser Ile
 305 310 315
 Arg Ala Glu Asn Ile Ile Ser Lys Thr His Gln Tyr His Lys Ile
 320 325 330
 Gln Val Trp Pro Ser Arg Ile Gln Pro Ala Val Phe Ala Phe Pro
 335 340 345
 Cys Ala Thr Leu Ile Thr Val Met Leu Ala Phe Ile Met Tyr Met
 350 355 360
 Thr Leu Arg Asn Ala Thr Gln Gln Lys Asp Met Val Glu Asn Pro
 365 370 375
 Glu Pro Pro Ser Gly Val Arg Cys Cys Cys Gln Met Cys Cys Gly
 380 385 390
 Pro Phe Leu Leu Glu Thr Pro Ser Glu Tyr Leu Glu Ile Val Arg
 395 400 405
 Glu Asn His Gly Leu Leu Pro Pro Leu Tyr Lys Ser Val Lys Thr
 410 415 420
 Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 242
 catttcctta ccttgaccc agctcc 26

 <210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccog agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggccgct tgcctcctgc tcctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt ccacacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccaacttcc ccatctgcac tttctgtctg 250
ggctgctgtc atogatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgcctg cccccgtccc ctcccttctc tatttatctc tctgtcccca 350
gaacataggt ctggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tccaccatgt tctgttgcgt gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcacct 150
ccttctcgtt ttcacatag tgccagccat ttttgagtc tctttggta 200
tccgcaaaat ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcagaggagc caaggagaag aaccaccagc ttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcaact gaagaagaga 350
tcaaaagatg tcgtcgaagt ggtagtagta aggcctctgga caaactcca 400
gagttcagc tctctgacat tttctacttt tgccggaaaag gaatggagac 450
cattatggat gatgaggtga caaagagatt ctacagagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttcacgta catcagcctt 550
cggctcacgg tctctgtggg gttaggagt ctgattcggt actgctttct 600
gctgcogctc aggatagcac tggctttoac agggatttagc cttctggtgg 650
tgggcacaaac tgtgttgga tacttgccaa atgggaggtt taaggaattc 700
atgagtaaac atgttcactt aatgtgttac cggatctgcg tgcgagcgct 750
gacagccatc atcacctacc atgacaggga aaacagacca agaaatgggtg 800
gcattctgtg ggccaatcat acctcacgga tcgatgtgat catcttggcc 850
agcgtatggc attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaaacctg 1050
catcaataat acatcgggtg tgatgttcaa aaagggagt tttgaaattg 1100
gagccacagt ttacctgtt gctatcaagt atgacctca atttggcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200
gatgaccagg tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcaggaggg acttgtggac ctgctgtggg atgggggcct 1350

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	80	85	90
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	95	100	105
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	110	115	120
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	125	130	135
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	140	145	150
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	155	160	165
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	170	175	180
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	185	190	195
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	200	205	210
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	365	370	375
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	380	385	390

gacatggagt ttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu
1 5 10 15

His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcatt ttcagtggtc gacttcaga gagcaatatg gctggttccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100

gocctcggac ccgtgaaaga gctggtcggg tccgttgggt ggccgtgac 150

tttcccctg aagtcctaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaac ccctcttgct accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctacagcaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccaccca ggagtacgtg 400

ctgcatgtct acgagcacct gtcaaacgct aaagtcacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattgaac 500

atggggaaga ggaatgtatt tatactgga aggcctcggg gcaagcagcc 550

aatgagtccc ataattgggtc catcctcccc atctctcgtg gatggggaga 600

aagtatatg accttcatct gcgttgcoag gaaccctgtc agcagaaact 650

tctcaagccc catccttgcc aggaagctct gtgaagggtc tgcattgac 700

ccagattcct ccatggtcct cctgtgtctc ctgttggtgc ccctcctgct 750

cagtctcttt gtactggggc tatctctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850

cctaacatat gccccattc tgagagaaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tcagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000

atgccagaca caccaaggct atttgctat gagaatgta tctagacagc 1050

agtgcactcc cctaagcttc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctgggtcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcggtt ccgttggtgg 100
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgta ccatagacc agaagggggc 200
actatcatag tgaccacaaa tcgtaaatag gagagagtag acttcccaga 250
tggagggtac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctcacccag 350
gagtacgtgc tgcattgtct cgagcacctg tcaaagccta aagtcacat 400
gggtctcgag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgatt atacctggaa ggccctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcattct cgttgcagag aacctgtca 600
gcagaaaact ctcaagcccc atccttgcca ggaagctctg tgaagtgct 650
gtgatgacc cagattcctc catggctcct ctgtgtctcc tgttggtgcc 700
cctcctgctc agtctctttg tactggggct atttcttttg tttctgaaga 750
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcacga tgccagacac accaaggcta ttgctctat agaattgtat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtctctgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggccctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgac ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
 tctatgggtg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaaggtt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
 gccctcagtg ttgagtggac actctccacc aggactccac catcatccct 650
 tctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800
 gacaattttt catgaaatta ttctctcttc tgttcaataa atgattacc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
 1 5 10 15
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met
125 130 135

Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu
140 145 150

Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn
155 160 165

Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu
170 175 180

<210> 257
<211> 766
<212> DNA
<213> Homo sapiens

<400> 257
ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
gacatctcgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
tctcaaaacc ccattctctt ctttgagtgg tggttcccg gaattatagg 200
agcaggctct atggccattc cagcaacaac aatgtccttg acagcaagaa 250
aaagagcgct ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
agtgtgatca cagtcattgg tgctctgtat tgcattgcta tatccatcca 350
ggctctctta aaaggtcttc tcatgtgtaa ttctccaagc aacagtaatg 400
ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
ttcaacttgc agtggttttt caatgactct tgtgcacotc ctactgggtt 500
caataaacc accagtaacg acaccatggc gagggtgctg agagcatcta 550
gtttccaatt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
gtatttttag gtctattgct tgggtgaatt ctggaggtcc tgtttgggct 650
cagtcagata gtcacgggtt tccttgctg tctgtgtgga gtctctaagc 700
gaagaagcta aattgtgtag tttaatggga ataaaatgta agtatcagta 750
gtttgaaaaa aaaaaa 766

<210> 258
<211> 229
<212> PRT
<213> Homo sapiens

<400> 258
Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
1 5 10 15

Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
20 25 30

Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215	220	225
Ser Gln Ile Val			

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50
 caccatgagg ctgtcagtggt gtctcctgat ggtctcgtcg gccctttgct 100
 gctaccaggc ccattgctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtcttcttat tcttaagtga cgctgcgcta aacctccaag ttgccaaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcaactgca 250
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcttggttg 300
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaaggtt 400

NATIONAL BUREAU OF STANDARDS
 U.S. DEPARTMENT OF COMMERCE
 100 BUREAU DRIVE
 GAITHERSBURG, MARYLAND 20899
 (301) 975-3000
 (301) 975-3001
 (301) 975-3002
 (301) 975-3003
 (301) 975-3004
 (301) 975-3005
 (301) 975-3006
 (301) 975-3007
 (301) 975-3008
 (301) 975-3009
 (301) 975-3010
 (301) 975-3011
 (301) 975-3012
 (301) 975-3013
 (301) 975-3014
 (301) 975-3015
 (301) 975-3016
 (301) 975-3017
 (301) 975-3018
 (301) 975-3019
 (301) 975-3020
 (301) 975-3021
 (301) 975-3022
 (301) 975-3023
 (301) 975-3024
 (301) 975-3025
 (301) 975-3026
 (301) 975-3027
 (301) 975-3028
 (301) 975-3029
 (301) 975-3030
 (301) 975-3031
 (301) 975-3032
 (301) 975-3033
 (301) 975-3034
 (301) 975-3035
 (301) 975-3036
 (301) 975-3037
 (301) 975-3038
 (301) 975-3039
 (301) 975-3040
 (301) 975-3041
 (301) 975-3042
 (301) 975-3043
 (301) 975-3044
 (301) 975-3045
 (301) 975-3046
 (301) 975-3047
 (301) 975-3048
 (301) 975-3049
 (301) 975-3050
 (301) 975-3051
 (301) 975-3052
 (301) 975-3053
 (301) 975-3054
 (301) 975-3055
 (301) 975-3056
 (301) 975-3057
 (301) 975-3058
 (301) 975-3059
 (301) 975-3060
 (301) 975-3061
 (301) 975-3062
 (301) 975-3063
 (301) 975-3064
 (301) 975-3065
 (301) 975-3066
 (301) 975-3067
 (301) 975-3068
 (301) 975-3069
 (301) 975-3070
 (301) 975-3071
 (301) 975-3072
 (301) 975-3073
 (301) 975-3074
 (301) 975-3075
 (301) 975-3076
 (301) 975-3077
 (301) 975-3078
 (301) 975-3079
 (301) 975-3080
 (301) 975-3081
 (301) 975-3082
 (301) 975-3083
 (301) 975-3084
 (301) 975-3085
 (301) 975-3086
 (301) 975-3087
 (301) 975-3088
 (301) 975-3089
 (301) 975-3090
 (301) 975-3091
 (301) 975-3092
 (301) 975-3093
 (301) 975-3094
 (301) 975-3095
 (301) 975-3096
 (301) 975-3097
 (301) 975-3098
 (301) 975-3099
 (301) 975-3100
 (301) 975-3101
 (301) 975-3102
 (301) 975-3103
 (301) 975-3104
 (301) 975-3105
 (301) 975-3106
 (301) 975-3107
 (301) 975-3108
 (301) 975-3109
 (301) 975-3110
 (301) 975-3111
 (301) 975-3112
 (301) 975-3113
 (301) 975-3114
 (301) 975-3115
 (301) 975-3116
 (301) 975-3117
 (301) 975-3118
 (301) 975-3119
 (301) 975-3120
 (301) 975-3121
 (301) 975-3122
 (301) 975-3123
 (301) 975-3124
 (301) 975-3125
 (301) 975-3126
 (301) 975-3127
 (301) 975-3128
 (301) 975-3129
 (301) 975-3130
 (301) 975-3131
 (301) 975-3132
 (301) 975-3133
 (301) 975-3134
 (301) 975-3135
 (301) 975-3136
 (301) 975-3137
 (301) 975-3138
 (301) 975-3139
 (301) 975-3140
 (301) 975-3141
 (301) 975-3142
 (301) 975-3143
 (301) 975-3144
 (301) 975-3145
 (301) 975-3146
 (301) 975-3147
 (301) 975-3148
 (301) 975-3149
 (301) 975-3150
 (301) 975-3151
 (301) 975-3152
 (301) 975-3153
 (301) 975-3154
 (301) 975-3155
 (301) 975-3156
 (301) 975-3157
 (301) 975-3158
 (301) 975-3159
 (301) 975-3160
 (301) 975-3161
 (301) 975-3162
 (301) 975-3163
 (301) 975-3164
 (301) 975-3165
 (301) 975-3166
 (301) 975-3167
 (301) 975-3168
 (301) 975-3169
 (301) 975-3170
 (301) 975-3171
 (301) 975-3172
 (301) 975-3173
 (301) 975-3174
 (301) 975-3175
 (301) 975-3176
 (301) 975-3177
 (301) 975-3178
 (301) 975-3179
 (301) 975-3180
 (301) 975-3181
 (301) 975-3182
 (301) 975-3183
 (301) 975-3184
 (301) 975-3185
 (301) 975-3186
 (301) 975-3187
 (301) 975-3188
 (301) 975-3189
 (301) 975-3190
 (301) 975-3191
 (301) 975-3192
 (301) 975-3193
 (301) 975-3194
 (301) 975-3195
 (301) 975-3196
 (301) 975-3197
 (301) 975-3198
 (301) 975-3199
 (301) 975-3200
 (301) 975-3201
 (301) 975-3202
 (301) 975-3203
 (301) 975-3204
 (301) 975-3205
 (301) 975-3206
 (301) 975-3207
 (301) 975-3208
 (301) 975-3209
 (301) 975-3210
 (301) 975-3211
 (301) 975-3212
 (301) 975-3213
 (301) 975-3214
 (301) 975-3215
 (301) 975-3216
 (301) 975-3217
 (301) 975-3218
 (301) 975-3219
 (301) 975-3220
 (301) 975-3221
 (301) 975-3222
 (301) 9

```
<210> 262
<211> 89
<212> PRT
<213> Homo sapiens
```

THE FUTURE

```
<210> 263
<211> 1676
<212> DNA
<213> Homo sapiens
```

231

ctgagcaag atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcgac cttaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcattctccg atgctgcacc 1250
 caggacattg ttctccaga tggccgagtc atccccaag gcattacctg 1300
 cctcatcgat attatagggg tccatcaca ccaactgtg tggccggatc 1350
 ctgaggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctcgca gggcccagga actgcacgg 1450
 gcagcggttc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcacttccg gttcctgcca gaccacactg agcccgcag gaagtgagg 1550
 ttgatcatgc gcgcgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600
 tgtaggcttg cagtgacttt ctgaccatc cacctgtttt ttgcagatt 1650
 gtcatgaata aaacgggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
 125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met
				140					145					150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr
				155					160					165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His
				170					175					180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile
				185					190					195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe
				200					205					210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile
				215					220					225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu
				230					235					240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg
				245					250					255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val
				260					265					270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp
				275					280					285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp
				290					295					300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp
				305					310					315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His
				320					325					330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala
				335					340					345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu
				350					355					360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu
				365					370					375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg
				380					385					390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp
				395					400					405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys
				410					415					420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro
				425					430					435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser
				440					445					450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgtttgct ttccacagga ttcttaaatc ctctottatc 100
tcttcctctc ctgactcca gggaaatata cttcaactc tcagcacctc 150
atgaagacgc gcgcttaact cggaggagc tagaaagagc ttcccttcta 200
cagatatgac cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccacaa tttttaaccc aaggaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatcctaaca ttttactgag tcatcttttg 350
gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
gaaatactgt gtctgaagtg aaataagcat ctgttagtca gtcacagaac 450
acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15
Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30
Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45
Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 75

Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90

Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105

Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120

Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacattttt agttccaag gaatgtacat cagccccacg gaagctaggc 50
caccctctggg atgggggttgc tgggtttaaaa caaacgccag tcatctata 100
taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150
acctgtctgc aacccagctg aggccatgcc ctcccagggt accgtctgca 200
gcctctctgct cctcggtcatg ctctggctgg acttggccat ggcaggctcc 250
agcttctcta gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtcggc 400
ttcaacgccc cttttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
gcagcacagc caggccctgg ggaagtctct tcaggacato ctctgggaa 500
aggccaaaaga ggccccagcc gacaagtgat cgcccaaac cttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgagc 600
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met
1 5 10 15

Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30

Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 269
 cgccacacagc tggcatgctc tgcctgatcg ccatcctgct gtatgtcctc 50
 gtccagtacc tcgtgaaccc cggggtgctc cgacaggacc ccagatgtca 100
 agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcagggtg 150
 cagaccctga tagtcgtgat catcgggatg ctctgtctcc tgctggactt 200
 tcttggtctg gtgcacctgg gccagctgct catcttccac atctacctga 250
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
 gctgtctcat ttacacctct acttgagtat gtccctaacc ctgagcccc 350
 cccgctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
 cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
 gccagacct gcaggagtgg tgccaggtgc ttgaagtaac aagtttaaaa 550
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
 aaataaggac aggtggactt ccaaaaaaac aagtagaaat tctaacaatg 650
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700
 tgtggtcttg ctgtgtctca cagtgggcac agcggtaggc ggtcagtcac 750
 gttgtctgac gacggagggt aaactcccca gcccagaaga aacctgtgtt 800
 ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850
 tgggccagct gcaaaagctc ttccattctc tgggcagtggt tggccccgag 900
 gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950
 aggcagcccc ccaagaatgc cctgtctctg acagcttggc caacccctgg 1000
 tcagggcaga gggagtggg tgggtcaggc tctgggctca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100
 acacacccca ccaagagcct cctgtttcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatatctt acagtcactg ttgtcttgcc tgaggggtga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtgacga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
 accatggcca agatggagct ctccaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc aaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaaa gtctggcagc caagtgcctt gacatgccag tgcctctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga cgggttctcc ttccggagct tccggagtgg catgtggcta 350
 tctgtgaggg aaactgtgga agaaccaggg gagagggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagagggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccaccactc tccgatttgg agggaagcgg 500
 ttgatggaga aggcttccct cccctccctc cccttggggc ttgtggtcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcacatgct tctcctgct actaacagac ttgctactca ctgggaaccc 650
 tgctgtggg ctcaaactga gcgcctttgc tgcgtttcc tctgtcctgt 700
 cagggtctct ggggatggtg gccacatga tgtattocaa agtcttcaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctggggc ttctacatgg cctggctctc ctccaccgc tgcattggct 850
 cggctgtcac caccttaac acgtacacca ggatggtgct ggagttaag 900
 tgcaagcata gtaagagctt caaggaatac ccgaactgcc taccacatca 950
 ccatcagtg ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050
 gagggagctg acttctactc cgagctggcg aacaaggatg ttcaaaggag 1100
 ggccagccag gagctgaaag aagcagttag gtcatctgta gaggaagagc 1150
 agtgtttaga gttaagcggg tttggggagt aggcctgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggtacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttctgggtg ccaactgctc ctttctctc acagctccat 1350
 cttgtttcac ccacccaca tctcacacat ccagaattcc cttctttact 1400
 gatagtctt gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaaataca ctcccgacc ttaaggatct gaaa 1484

<210> 272
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 272
 Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr
 1 5 10 15
 Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr
 20 25 30
 Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

accaaccagg gtagtgcat ggagcaccgt aaccatctgt gottctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgccctat tectctccc aagtctgttc tctattgtgc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag cccaggaga aatggaggag cttgttagcc 500
 acctccctgt cagccagtat taacatgtcc cttccccct gccccgccgt 550
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttccctt 600
 ggcttggcat ccttggtct ctccgtgtac ccagcaagac gtctgttcca 650
 gggcagtgtg gcattcttca agctccgtta ctatggcgtat ggccatgatg 700
 ttacaatccc acttgctga ataatacaagt gggaagggga agcagagggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaaggga agcaacagga acttctgcaa ctggttttta tcggaagat 850
 catctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctgggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcaact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccagt gtattacctg 1050
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat ccccaatgg 1100
 tttctcaat tatgcccatg ccacccaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 274
 Met Trp Leu Pro Leu Gly Leu Leu Ser Leu Cys Leu Ser Pro Leu
 1 5 10 15
 Pro Ile Leu Ser Ser Pro Ser Leu Lys Ser Gln Ala Cys Gln Gln
 20 25 30
 Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn
 35 40 45
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly
 50 55 60
 Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg
 65 70 75
 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu
 80 85

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
 gtagecgcgtc ttgggtctcc cggtgccgc tgctgccgc gccgcctcgg 50
 gtcgtggagc caggagcgac gtcaccgccca tggcaggcat caaagccttg 100
 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccctt ccaatataca acaataactg gccctctttt gttctatttt 200
 tttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag cttttggact cctatttgta ttgcccagag 350
 cacatctgat tgagtggga gcttgtgcac ttgtctcac aggaacaca 400
 gtcatctttg caactatact aggccttttc ttggtcttgg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
 atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550
 gttaatgctg aatggtatag caagcctctt ggggggtatt taggtgctcc 600
 cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
 attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttatt 700
 tatagtatgc tttttgttgt gtccctgctga atttaaatat ttatgtgttt 750
 ttctgttagt gttgattttt ttgggaatca atatgcaatg ttaaacactt 800
 ttttaagtga atcatttgca ttggttagga attcagaatt ccgccggctc 850
 tattactggt caagtacatc ttttctctta aaattattta gcctccatta 900
 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
 cccaatgtta tgcagacata cagacggttg gcatacgtta tagactgtat 1000
 actcagtgca aatatagctg catttatacc tcagaggggc caagtgttaa 1050
 tgcccattgc ctccgttaag ggttggttgt tttacttgta gacagatgtt 1100
 ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150
 tctcaattgt tagaagaatt tatgttaaac tttaaggtaa ggggtgtaaa 1200
 acatttttga gataaggttt ttatttatgt ttattattgt tagagtgtgt 1250
 tgcaattgtg gaagaaatga cattgaaatt ccagtttttg aatccgtgtt 1300
 ctatttataa gtgaaatttg tgatctccta tcaaccttcc atgttttacc 1350
 ctgttaaaaa ggacatacat ggaaccacta ctgatgaggg acagtgtgat 1400
 gtttgcatca tatatgccag aaaaccttcc tctgcttcct ccttttgact 1450

ttttgggtat gttgtatata ttacataaaa taacttttca aatatagttt 1500
 aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550
 cattcagagt gccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600
 cttgttagtc ttacagataa ttcatgcatt aacagtttaa gatttagacc 1650
 atggtaatat tagttcttat tctctaagggt tatatcatat gtaattttaa 1700
 agtattttta agacaagttt cctgtatacc tctgaactgt tttgattttg 1750
 agttcatcat gatagatctg ctgtttcctt ataaaaggca tttgttgtgt 1800
 gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
 acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtggtc 1900
 gtttacatct aataattatc aggacttttt tcaggagtgg gttataaaaa 1950
 cattcaagtt ggtctgacag tattttgtta aggataattg tttgtatgtt 2000
 tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
 aatcatgaca gctgtctggt gttttatgaa gttattttct caagaaaatg 2100
 ggaataaatt tgggatttgt tcagcttttt tactaaagat gcctaaagcc 2150
 acaggtttta ttgcctaact taagccatga ctttttagata tgagatgacg 2200
 ggaagcagga cgaatatatc gcgtgtggct ggagccttcc cactggaggc 2250
 tgaaagtggc ttgtggtatt ataagtcca gatttcaaga ggaaggtgca 2300
 ggtacacatg agtttagagag ctggtgagac agttgggaac tctttgtgct 2350
 tgtgatctac tggacttttt ttttgcagga agtgcattct ctggtccttc 2400
 cctattttct gttctggatg tcagtgcagt gcactgctac tgttttatcc 2450
 acctggccac agactttttc taacagctgc gtattatttc tatatactaa 2500
 ttgcattggc agcatttgtt ctttgacctt gtatactagc ttgacatagt 2550
 gctgtctctg atttctaggc tagttacttg agatatgaat ttccataga 2600
 atatgcaact atacaacatt accattcttc tatggaaga aaacttttga 2650
 tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala

1

5

10

15

Ile Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr

20

25

30

Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe	110		115		120
Gly Ser Asn Asp Phe Ser Trp Gln Gln Trp	125		130		

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
 cccacgcgtc cgccccacgcg tccgccccacg cgtccgccca cgcgtccgcc 50
 cacgcgtccg cccacgcgtc cgccccacgcg tccggtgcaa gtcgcgcgcg 100
 cacactgcct ggtggaggga aggagcccg gcgcctctcg ccgctccccc 150
 cgccgcgcgc cgcaactccc caaccgcccgc cgcccgccgc ccgccgccc 200
 caaagcatga gtgagcccg tctctgcagc tgcccggggc gcgaatggca 250
 ggctgtttcc gcggagtaaa aggtggcgcc ggtagtggt cgtttccaat 300
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agaggggaaag 400
 gaaggcggca ggaaggcgaa gtcggggcto cggcacgtag ttgggaaact 450
 tgccgggtcct agaagtgcgc tccccgcctt gccggccgccc cttgcagccc 500
 cgagccgagc agcaaagtga gacattgtgc gctgcccaga tccgccggcc 550
 gcggaccggg gctgcctcgg aaacacagag gggttctctc tcgccctgca 600
 tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcaactc 650
 ctggaagg atttctgacc gagcgcttcc aatggacatt ctccagtcctc 700
 tctgaaaga ttctcgctaa tggatttctc gctgctcggt ctctgtctat 750
 actggctgct gaggaggccc tcgggggttg tcttgtgtct gctgggggcc 800
 tgctttcaga tgctgccgc cgccccacgc gggtgcccg agctgtgccg 850
 gtgcgagggg cggtgctgt actgcgaggc gctcaacctc accgagggcg 900
 cccacaacct gtccggcctg ctgggcttgt ccctgcgcta caacagcctc 950

toggagctgc gcgccggcca gttcacgggg ttaatgcagc tcacgtggct 1000
 ctatctggat cacaatcaca tctgtccgt gcagggggac gcctttcaga 1050
 aactgcgcgc agttaaggaa ctacagctga gttccaacca gatcacccaa 1100
 ctgcccaca ccaccttccg gcccatgccc aacctgcga cggtggacct 1150
 ctctgtaaac aagctgcagg cgctcgogcc cgacctctc cacgggctgc 1200
 ggaagctcac caogctgcat atgcgggcca acgccatcca gtttgtgcc 1250
 gtgcgcatct tccaggactg ccgcagcctc aagtttctc acatcgata 1300
 caatcagctc aagagtctgg cgcgcaactc ttctgcggc ttgtttaagc 1350
 toaccagact gcacctogag cacaacgact tggtaagggt gaacttcgcc 1400
 cacttccgc gctcatctc cctgcactcg ctctgctgc ggaggaacaa 1450
 ggtggccatt gtggtcagct cgctggactg ggtttggaac ctggagaaaa 1500
 tggacttgct gggcaacgag atcgagtaca tggagcccca tgtgttcgag 1550
 accgtgcgc acctgcagtc cctgcagctg gactccaacc gctcaccta 1600
 catcgagccc cggatcctca actcttgaa gtccctgaca agcatcacc 1650
 tggccgggaa cctgtgggat tgcgggcca acgtgtgtgc cctagcctcg 1700
 tggctcagca acttcaggg gcgctacgat ggcaacttc agtgcgccag 1750
 cccggagtag gcacaggcg aggacgtcct ggacgcctg tacgccttc 1800
 acctgtgcga ggtggggcc gagcccacca gcggccact gctctcgcc 1850
 gtcaccaacc gcagtatct gggggccct gccagctcg ccaccaogct 1900
 cgcggagggc ggggagggc agcacgacgg cacattcgag cctggccag 1950
 tggctcttc agggcgagag cagcccgaga acgccgtgca gatccacaag 2000
 gtggtcacgg gcacctggc cctcatctc tcttctca tegtgtct 2050
 ggtgtctac gtgtcctga agtgtttccc agccagcctc aggcagctca 2100
 gacagtgtct tgtacgcag cgcaggaagc aaaagcaga acagaccatg 2150
 catcagatgg ctgccatgtc tgcccaggaa tactaogttg attacaaacc 2200
 gaaccacatt gagggagccc tgggtgatcat caacgagtat ggctcgtgta 2250
 cctgccacca gcagcccgcg aggggaatcg aggtgtgatt gtocagtg 2300
 ctctcaacc atgcgtacc aaatacgcct gggcagccg gcaggggcgg 2350
 cgggcaccag gctgggtct ccttgtctgt gctctgatat gctccttgac 2400
 tgaacttta aggggatctc tcccagagac ttgacattt agctttattg 2450
 tgtcttaaaa aaaaagcga attaaaacac aaaaaaac cccacccac 2500
 aaccttcagg acagtctatc ttaaatcca tatgagaact ccttctctcc 2550

tttgaagatc tgtccatatt caggaatctg agagtgtaaa aaaggtggcc 2600
 ataagacaga gagagaataa tcgtgctttg ttttatgcta ctccctccac 2650
 cctgcccatg attaaacatc atgtatgtag aagatcttaa gtccatacgc 2700
 atttcatgaa gaaccattgg aaagaggaat ctgcaatctg ggagcttaag 2750
 agcaaatgat gaccatagaa agctatgttc ttactttgtg tgtgtgtctg 2800
 tatgtttctg cgttgtgtgt ctttgtaggc aagcaaacgt tgtctacaca 2850
 aacgggaatt tagctcacat catttcatgc ccctgtgcct ctagctctgg 2900
 agattggtgg ggggaggtgg ggggaaacgg caggaataag ggaaagtgg 2950
 agttttaact aaggttttgt aacacttgaa atcttttctt tctcaaat 3000
 attatcttta agcttcaaga aacttgcctt gacccctcta agcaactac 3050
 taagcattta aaagagaatc taatttttaa aggtgtatga cctttttttt 3100
 tattctctcc acagaggggtg ctaatctcat tatgctgtgc tatctgaaaa 3150
 gaaacttaag ccacaattca cgtctcgtcc tgggcattgt gatggattga 3200
 ccctccattt gcagctacct ccagctgat taaagttcag cagtgggtatt 3250
 gaggtttttc gaatatattat atagaaaaaa agtcttttca catgacaaat 3300
 gacactctca caccagctct agccctagta gtttttttag ttggaccaga 3350
 ggaagcaggt taaatgagac ctgtcctctg ctgcactcag aaaaaatagg 3400
 cagtccctga tgctcagatc ttagccttga tattaatagt tgagaccacc 3450
 taccacaat gcagcctata ctccaagac tacaaagtta ccatcgcaaa 3500
 ggaaaggtta ttccagtaaa aggaaatagt ttctcaacc atttaaaaaat 3550
 attctcttga actcatcaa gtagaagagc cccaacctt ttctctctgc 3600
 cttcaagaag gcagacattt ggtatgattt agcatcaaca acacatttat 3650
 gagtatatgt aagtaatcag aggggcaaat gccacttgtt attcctccca 3700
 agttttccaa gcaagtacac acagatctct ggtaggatta ggggccactt 3750
 gtgtttccgg cttatttttag tcgacttgto agcaagtttg atgcctagtc 3800
 tatctgacat ggcccagtag aacagggcat tgatggatca catgagatgg 3850
 tagaaggaa atcatcacat acccctctca cagagaaaa tatcaagaa 3900
 ccagaaatta tatctgtttt ggagcaagag tgtoataatg ttccagggta 3950
 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggtg 4000
 atttgggtct gccattgaca gaatgtcaaa taaaaaggaa ttagctagaa 4050
 tatgaccatt aaatgtgctt ctgaaatata ttttgagata ggtttagaat 4100
 gtca 4104

<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg	1	5	10	15
Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	20	25	30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	35	40	45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	50	55	60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	65	70	75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	80	85	90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	95	100	105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	110	115	120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	125	130	135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	140	145	150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	155	160	165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	170	175	180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	185	190	195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	200	205	210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	215	220	225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	230	235	240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	245	250	255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	260	265	270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	275	280	285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
				290					295					300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
				440					445					450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
				500					505					510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
				515					520					

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tcogtgcagg gggacgcctt tcagaaactg cgccgagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
 gtgcaaggag ccgagggcgag atgggcggtc tgggcccgggt cctgctgtgg 50
 ctgcagctct gcgcactgac ccagggcggtc tccaaactct gggccccaa 100
 cacggacttc gacgtcgag ccaactggag ccagaaccgg acccgtgcg 150
 ccggcggcgc cgttgagttc ccggcggaca agatggtgtc agtctggtg 200
 caagaaggtc acgccgtctc agacatgctc ctgccgtgg atggggaact 250
 cgtcctggct tcaggagccg gattcggcgt ctacagctg ggctcgcacc 300
 tggactgtgg cgcgggcgaa cctgccgtct tccgcgactc tgaccgttc 350
 tcttgcatg acccgcacct gtggcgctct ggggacgagg cacctggcct 400
 cttcttcgtg gacgccgagc cgtgcccctg ccgccacgac gacgtcttct 450
 ttccgcctag tgctctcttc cgcgtggggc tcggccctgg cgctagcccc 500
 gtgcgtgttc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
 ggacctggct gttttcctgg cgtcccgccg gggccccta cgttccacg 600
 ggccgggcgc gctgagcgtg ggcggcgagg actgcgcgga ccgctcgggc 650
 tgcgtctcgc gcaacgcgga ggccgagccg tggatctcgc cgccctgct 700
 ccagcccct 709

<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
 Met Gly Val Leu Gly Arg Val Leu Leu Trp Leu Gln Leu Cys Ala
 1 5 10 15
 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe
 20 25 30
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly
 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225

Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
atgcatcaa ttgggagtag catcttctc atgggaccag tgaacacgct 50
gaagcgaatg tttagacctg ctggtttgat tgcaactatc atggtgtgtg 100
tgtgttttgc acttaccctg tgttctgcct tttggtggca taacaaggga 150
cttgcaactta ttttctgcat tttagcagtct ttggcattga cgtggtacag 200
ccttctcttc ataccatttg caagggatgc tgtgaagaag tgttttgcg 250
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
tggacagaag ctggttgaca gttttgtaac tatcttcgaa acctctgtct 350
tacagacatg tgccctttat cttagcagca tgtgttgctt gtgattcgaa 400
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
cctcatgtac ctgtttctc tctggatgtt gtccactga attccatga 550
atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
1 5 10 15
Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe					
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75
Leu Ala					

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
 ttgagcgccag gtgagctcct ggcggttcgc ggggcgttcc tcagtcacc 50
 ctcccgcgtg taccgcgcgc gcgcccgcgc gagtctctcc cagaccctcc 100
 ctcccgttgc tccaaactaa tacggactga acggatcgct gcgaggggtg 150
 gagagaaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatcttacac tgaactgacg aagtactttg aaaatgactt 250
 cgaaatttat ctgtgtgtcc ttcatacttg ctgcactgag tctttcaacc 300
 accttttctc tccaaactaga ccagcaaaaag gttctactag tttcttttga 350
 tggattccgt tgggattact tatataaagt tccaaagccc cattttcatt 400
 atattatgaa atatggtgtt cacgtgaagc aagttaactaa tgtttttatt 450
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500
 gaatcatggg attgttgcaa atgatatggt tgatcctatt cggaaacaaat 550
 ctttctcctt ggatcacatg aatatttatg attccaagtt ttgggaagaa 600
 ggcacaccaa tatggatcac aaaccagagg gcaggacata ctagtgtgtc 650
 agccatgtgg ccggaacag atgtaaaaat acataagcgc tttcctactc 700
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgccaaa 750
 attgttgaat ggtttacgtc aaaagagccc ataaatcttg gtcttctcta 800
 ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtccgc 850
 tcattggggc tgtcatttca gatattgaca agaagttagg atatctcata 900
 caaatgtcta aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950
 aagtgatcat ggaatgacgc agtgctctga ggaaagggtta atagaacttg 1000
 accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050
 gcagccatct tgccaaaaga aggtaaattt gatgaagtct atgaagcact 1100

aactcagcgt catcctaato ttactgttta caaaaaagaa gacgttccag 1150
 aaaggtggca ttacaaatac aacagtcgaa ttcaaccaat catagcagtg 1200
 gctgatgaag ggtggcacat ttacagaat aagtcagatg actttctgtt 1250
 aggcacaacc ggttacgata atgcgttagc agatatgcac ccaatatttt 1300
 tagcccatgg tctgccttc agaaagaatt tctcaaaaga agccatgaac 1350
 tccacagatt tgtcccaact actatgccac ctctcaata tcaactgcat 1400
 gccacacaat ggatcattct ggaatgtcca ggatctgctc aattcagcaa 1450
 tgccaagggt ggtcccttat acacagagta ctatactctt ccctggtagt 1500
 gttaaaccag cagaatatga ccaagagggg tcataccott atttcatagg 1550
 ggtctctctt ggcagcatta tagtgattgt attttttgta attttcatta 1600
 agcatttaat tcacagtcac atacctgcct tacaagatat gcatgctgaa 1650
 atagctcaac cattattaca agcctaattgt tactttgaag tggatttgca 1700
 tattgaagtg gagattccat aattatgtca gtgtttaaag gtttcaaatt 1750
 ctgggaaacc agttccaac atctgcagaa accattaagc agttacatat 1800
 ttaggatata acacacacac acacacacac atacacacac acggacccaa 1850
 atacttacac ctgcaaagga ataaagatgt gagagtatgt ctccattgtt 1900
 cactgtagca tagggataga taagatcctg ctttatttgg acttggcgca 1950
 gataatgtat atatttagca actttgcact atgtaaagta cottatatat 2000
 tgcactttaa atttctctcc tgatgggtac ttttaattga aatgcacttt 2050
 atggacagtt atgtcttata acttgattga aaatgacaac tttttgcacc 2100
 catgtcacag aataactgtt acgcattgtt caaactgaag gaaatttcta 2150
 ataattccga ataatagaac tagaaatcta tctccataaa ttgagagaag 2200
 aagaaggtga taagtgttga aaattaaatg tgataacctt gaaaccttga 2250
 attttggaga tgtattccca acagcagaat gcaactgtgt gcatttcttg 2300
 tcttatttct ttccagagaa cgtgggtttc atttattttt cctccaaaag 2350
 agagtcaaat actgacagat tcgttctaaa tatattgttt ctgtcataaa 2400
 attattgtga tttcctgatg agtcataatta ctgtgatttt cataataatg 2450
 aagacaccat gaatatactt ttcttctata tagttcagca atggcctgaa 2500
 tagaagcaac caggcaccat ctacgcaatg ttttctcttg tttgtaatta 2550
 tttgtctctt tgaaaattaa atcactatta attacattaa aaatcaaatt 2600
 ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu	
1				5					10					15	
Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val	
			20						25					30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	
			35						40					45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	
				50					55					60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	
				65					70					75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	
				80					85					90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	
				95					100					105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	
				110					115					120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	
				125					130					135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	
				140					145					150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	
				155					160					165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	
				170					175					180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	
				185					190					195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	
				200					205					210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	
				215					220					225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	
				230					235					240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	
				245					250					255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	
				260					265					270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	
				275					280					285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp	

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr Asn Ser Arg Ile Gln Pro		
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp His Ile Leu Gln Asn Lys		
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His Gly Tyr Asp Asn Ala Leu		
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala His Gly Pro Ala Phe Arg		
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn Ser Thr Asp Leu Tyr Pro		
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr Ala Met Pro His Asn Gly		
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu Asn Ser Ala Met Pro Arg		
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile Leu Leu Pro Gly Ser Val		
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly Ser Tyr Pro Tyr Phe Ile		
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val Ile Val Phe Phe Val Ile		
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln Ile Pro Ala Leu Gln Asp		
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu Leu Gln Ala		
470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
 ggatttttgt gatccggat tcgctccac gggcgggacc ttgttaactg 50
 cgggaggccc aggcagggcc caccctgcgg ggccgggaggc agccgggggtg 100
 agggagggtga agaaaccaag acgcagagag gccaaagccc ttgccttggtg 150
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacaggggaca tggccacctg ggacgaaaag gcagtcaccc gcaggggccaa 250
 ggtggctccc gctgagagga tgagcaagtt cttaaggcac ttcacggtcg 300
 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350
 gaagaggagg aggaggagga ggagcagcca caccacacac cagtctcagg 400
 cgaggaaggc agagctgcag cccctgacgt tgccctgcc cctggccccc 450
 caccagggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500

tcccacaggt ttcaggtcat catcatctgc ttggtggttc tggatgccct 550
 cctggtgctt gctgagctca tcctggacct gaagatcato cagcccagaca 600
 agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650
 gtctttttta tgatggagat catctttaaa ttatttgctt tccgcctgag 700
 ttctttcacc acaagtttga gatcctggat gcccgctgtg gtggtggtct 750
 cattcatcct ggacattgtc ctctgtttcc aggagcacca gtttgaggct 800
 ctgggcctgc tgattctgct ccggtctgtg cggttggtccc ggatcatcaa 850
 tgggattatc atctcagtta agacacgttc agaacggcaa ctcttaaggt 900
 taaaacagat gaatgtacaa ttggccgcca agattcaaca ccttgagtgc 950
 agctgctctg agaagccctt ggactgatga gtttgcgtga tcaacctgta 1000
 aggagaagct ctctccggat ggctatggga atgaaagaat ccgacttcta 1050
 ctctcacaca gccaccgtga aagtcttgga gtaaaatgtg ctgtgtacag 1100
 aagagagaga aggaagcagg ctggcatgtt cactgggctg gtgttacgac 1150
 agagaacctg acagtccactg gccagttatc acttcagatt acaaatcaca 1200
 cagagcatct gcctgttttc aatcacaga gaacaaaacc aaaatctata 1250
 aagatattct gaaaatatga cagaatttga caaataaaag cataaacgtg 1300
 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
1				5					10				15	
Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
			20						25				30	
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
			35					40					45	
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
			50					55					60	
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
			65					70					75	
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
			80					85					90	
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
			95					100					105	
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
			110					115					120	

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

cggtctcgagc tcgagccgaa tcggctcgag gggcagtgga gcacccagca 50

ggccgccaac atgctctgtc tgtgcctgta cgtgccggtc atcggggaag 100

cccagaccga gttccagtac tttagtcga aggggctccc tgccgagctg 150

aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200

ctaccgccag tggaagcaga aaattgtaca agctggagat aaggacctg 250

atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300

aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggacg 350

cattgacgcg caggagatca tgcagtcctc gcgggacttg ggagtcgaaga 400

tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaacggcg 450

acgatgacca tcgactggaa cgagtggaga gactaccacc tctccacc 500

cgtgaaaaac atccccgaga tcactctcta ctggaagcat tccacgatct 550

ttgatgtggg tgagaatcta acggtcccgg atgagttcac atgtgaggag 600

aggcagacgg ggatgtggtg gagacacctg gtggcaggag gtggggcagg 650

ggccgtatcc agaacctgca cggtcccctt ggacaggctc aagggtgtca 700

tgcagggtcca tgcctccgcg agcaacaaca tgggcatcgt tggtggcttc 750

actcagatga	ttcagagaagg	aggggccagg	tcactctggc	ggggcaaatg	800
catcaacgtc	ctcaaaattg	ccccgaatc	agccatcaaa	tctatggcct	850
atgagcagat	caagcgccct	gttggtatg	accaggagac	tctgaggatt	900
cacgagaggc	ttgtggcagg	gtccttgcca	ggggccatcg	cccagagcag	950
catctaccca	atggagggtcc	tgaagaccgc	gatggcgctg	cggaagacag	1000
gccagtactc	aggaatgctg	gactgcgcga	ggaggatcct	ggccagagag	1050
gggggtggcg	ccttctacaa	aggctatgtc	cccaacatgc	tgggcatcat	1100
cccctatgcc	ggcatcgacc	ttgcagtcta	cgagacgctc	aagaatgcct	1150
ggctgcagca	ctatgcagtg	aacagcgcgg	accccggcgt	gtttgtgtct	1200
ctggcctgtg	gcaccatgtc	cagtaacctg	ggccagctgg	ccagctaccc	1250
cctggcccta	gtcaggaccgc	ggaatgcagg	gcaagcctct	attgaggggc	1300
ctccggaggt	gaccatgagc	agcctcttca	aacatatact	gcggaccgcg	1350
ggggccttgc	ggctgtacag	ggggctggcc	cccaacttca	tgaagggtcat	1400
cccagctgtg	agcatcagct	acgtggtcta	cgagaacctg	aagatcaccc	1450
tgggcgtgca	gtcgcgggtga	cggggggagg	gccgcccggc	agtggactcg	1500
ctgatectgg	gcgcgacgtc	gggggtgtga	gccatctcat	tctgtgaatt	1550
tgccaacact	aagctgtctc	gagccaagct	gtgaaaacct	tagacgcacc	1600
cgcaggggag	gtggggagag	ctggcaggcc	cagggcttgt	cctgtctgac	1650
ccagcagacc	ctcctgtttg	ttccagcgaa	gaccacaggc	attccttagg	1700
gtccagggtc	agcaggctcc	gggctcacat	gtgtaaggac	aggacatttt	1750
ctgcagtgcc	tgccaatagt	gagcttgagg	cctggaggcc	ggcttagttc	1800
ttccatttca	cccttgcagc	cagctgtttg	ccacggcccc	tgccctctgg	1850
tctgcctgtc	atctccctgt	gccctcttgc	tgctgtcctg	tctgtctagg	1900
taagggtggga	ggagggtctc	agccccacat	ccacccccct	gtccaatccc	1950
ataatccatg	atgaaaagggt	aggtcacgtg	gcctcccagg	cctgacttcc	2000
caacctacag	cattgacgcc	aacttggcgt	tgaagggaaga	ggaaggatc	2050
tggccttgtg	gtcactggca	tctgagccct	gctgatggct	ggggctctcg	2100
ggcatgcttg	ggagatgcagg	gggctcgggc	tgctgtggct	ggctgcacag	2150
aaggcaagtg	ctggggctca	tggtgtctgt	agctggcctg	gacctgtgca	2200
ggatggggcc	cacctcagaa	ccaaactcac	tgtccccact	gtggcatgag	2250
ggcagtgagg	cacctgtttt	gagggcgaag	ggcagagcgt	ttgtgtgttc	2300
tgggaaggga	agggaaaagg	gttgagggcc	ttaattatgg	actgttggga	2350

aaagggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400
 ttccagagga agacgaggga gcaggagctt ggctgactgc tcagagtctg 2450
 ttctgacgcc ctggggggttc ctgtccaacc ccagcagggg cgcagcggga 2500
 ccagcccccac attccacttg tgcactgct tggaaacctat ttattttgta 2550
 tttatttgaa cagagtatat tcctaactat tttatagat ttgtttaatt 2600
 aatagcttgt cattttcaag ttcatttttt attcatattt atgttcatgg 2650
 ttgattgtac cttccaagc cgcgccagtg ggatgggagg aggaggagaa 2700
 ggggggcctt gggcgctgc agtcacatct gtccagagaa attccttttg 2750
 ggactggagg cagaaaagcg gccagaaggc agcagccctg gctcctttcc 2800
 tttggcaggt tggggaaggg cttgccccca gccttaggat ttcagggttt 2850
 gactgggggc gtggagagag agggagggaac ctcaataacc ttgaaggtgg 2900
 aatccagtta tttctgcgc tgcgagggtt tctttatttc actcttttct 2950
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggaggg 3000
 ggctggagga gaggtgggg ggctggctcc gtccctccca gccttctgct 3050
 gcccttgctt aacaatgccg gccaaactggc gacctcacgg ttgcacttcc 3100
 attccaccag aatgacctga tgaggaaato ttcaatagga tgcaaatgac 3150
 aatgcaaaaa ttgttatata tgaacatata actggagctg tcaaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcattttaag cagccttcta 3250
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
 1 5 10 15
 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	100
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	175
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser
 410 415 420

Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu
 425 430 435

Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val
 440 445 450

Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly
 455 460 465

Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
 ggaaggcagc ggcagctcca ctcagccagt acccagatac gctgggaacc 50
 ttccccagcc atggcttccc tggggcagat cctcttctgg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcaggga gacactccat cacagtcact actgtcgct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 tttctgatat cgtgatacaa tggctgaagg aaggtgtttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggcccg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgcggct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca cttctaaagg caaggggaat gctaaccctt agtataaaac 500
 tggagccttc agcatgccg aagtgaatgt ggaactataat gccagctcag 550
 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtggtc 600
 tgggcatccc aagttgacca gggagccaac ttctoggaag tctccaatac 650
 cagcttttag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaaaatgac 750
 attgccaaa gcaacaggga tatcaaagtg acagaatcgg agatcaaaag 800
 gcggagtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900
 ctaaaaataa gtgccttggc cacaaaaaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttcaccacca gatatgacct agttttatat 1000
 ttctgggagg aaatgaattc atatctagaa gtctggagtg agcaacaag 1050

agcaagaac aaaagaagc caaaagcaga aggcaccaat atgaacaaga 1100
 taaatctatc ttcaaagaca tattagaagt tgggaaaata attcatgtga 1150
 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200
 gcatccccag atctcaggga cctcccccctg cctgtcacct ggggagttag 1250
 aggacagcat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300
 tgtaattgtg ctctgaggaa gccccctggaa agtctatccc aacatatcca 1350
 catcttatat tccacaaatt aagctgtagt atgtacccta agacgctgct 1400
 aattgactgc cacttcgcaa ctcaggggag gctgcatttt agtaatgggt 1450
 caaatgattc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500
 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550
 acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600
 ttaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile
 1 5 10 15
 Ile Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly
 20 25 30
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

	155		160		165
Leu Arg Cys Glu Ala Pro Arg Trp Phe	170	Pro Gln Pro Thr Val	175	Val	180
Trp Ala Ser Gln Val Asp Gln Gly Ala	185	Asn Phe Ser Glu Val Ser	190	195	
Asn Thr Ser Phe Glu Leu Asn Ser Glu	200	Asn Val Thr Met Lys	205	Val	210
Val Ser Val Leu Tyr Asn Val Thr Ile	215	Asn Asn Thr Tyr Ser	220	Cys	225
Met Ile Glu Asn Asp Ile Ala Lys Ala	230	Thr Gly Asp Ile Lys	235	Val	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser	245	His Leu Gln Leu Leu	250	Asn	255
Ser Lys Ala Ser Leu Cys Val Ser Ser	260	Phe Phe Ala Ile Ser	265	Trp	270
Ala Leu Leu Pro Leu Ser Pro Tyr Leu	275	Met Leu Lys	280		

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 292
 gaatttgtag aagacagcgg cgttgccatg gcggcgctctc tggggcaggt 50
 gttggctctg gtgctggtgg ccgctctgtg ggggtggcagc cagccgctgc 100
 tgaagcgggc ctccgcggc ctgcagcggg ttcattgaata ctgagtacct 150
 cagcagttgc tacaggagat gaagacccto ttcttgaata ctgagtacct 200
 gatgcccttt ctctcaacc agtgtggatc ccttctctat tacctcact 250
 tggcatcgac agatctgacc ctggctgtgc ccatctgtaa ctctctggct 300
 atcatcttca cactgattgt tgggaaggcc cttggagaag atattggtg 350
 aaaacgtaag ttagactact gcgagtgccg gacgcagctc tgtggatctc 400
 gacataacctg tgttagttcc tcccagaac ccatctcccc agagtgggtg 450
 aggacacggc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500
 ccttggtgcc atcagagttc ccttcccctg gacagtcttg agaaagacag 550
 aggcgtgggtt ttgggattga agaccagacc ccatctgagc ccttctctca 600
 gccctgtacc agctcctact ggcattggct agctcagacc ctctctgatt 650
 ctgcctatta tcccaggagc agttgctggc atggtgctca ccgtagatag 700
 aatttcactc tgcattcaca gctcagtgag taagaccacg gggcaacagt 750
 ctacccttgg agtgggcccga acccaacttc agctctgctg cctccaggaa 800

gcccttgggc catgaagtgc tggcagtgag cggatggacc tagcacttcc 850
 cctctctggc cttagcttcc tcctctctta tggggataac agctacctca 900
 tggatcaca taagagaaca agagtgaag agttttgtaa cttcaagtgc 950
 ctgttcagct gcggggattt agcacaggag actctacgct caccctcagc 1000
 aacctttctg ccccgagcgc tctcttctg ctaacatctc aggcctccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcaggttc 1100
 catggagtgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggcctctggg actcagtcag agcgctttgg 1200
 ctgaatgagg ggtggaaccg agggaagaag gtgcgtcgga gtggcagatg 1250
 caggaaatga gctgtctatt agccttgcct gccccaccca tgaggtaggc 1300
 agaaatcctc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtataac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala
 1 5 10 15
 Ala Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala
 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

cttctgtagg acagtcacca ggccagatcc agaagcctct ctaggctcca 50
gctttctctg tggaagatga cagcaattat agcaggagccc tgccaggctg 100
tcgaaaagat tcgcgaataa aactttgccg gtgggaagta cctagtga 150
cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtgg 200
ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcgtt 250
gctggtatca ctgcagtgct tgttgagct gtagaatctc tgagctgcgt 300
gcagtgaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
ctgcagtgag gagacacaca ttacagcctt cactgtccac gtgtctgctg 500
aagaacactt tcattttgta agccagtgct gccaaaggaaa ggaatgcagc 550
aacaccagcg atgccctgga cctccctctg aagaacgtgt ccagcaacgc 600
agagtgcctt gcttggtatg aatctaattg aacttctctg cgtgggaagc 650
cctggaaatg ctatgaagaa gaacagtggt tctttctagt tgcagaactt 700
aagaatgaca ttgagtctaa gagtctctg ctgaaaggct gttccaacgt 750
cagtaacgcc acctgtcagt tctgtctctg tgaacaacag actcttgag 800
gagtcattct tcgaaagttt gagtgtgcaa atgtaaacag cttaaccccc 850
acgtctgcac caaccacttc ccacaacgtg ggctccaaag ctccctcta 900
cctcttgccc ctgcccagcc tcttctctcg gggactgctg cctgaggtc 950
ctgggggtgc actttgccca gcacccatt tctgcttctc tgaggctccag 1000
agcacccctt gcggtgctga caccctctt cctgtctctg ccccgtttaa 1050
ctgccccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
ttgttcttca ttattaaagc actggttcat tcaactgccaa aaaaaaaaaa 1150
aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met Lys Gly Ile Leu Val Ala Gly Ile Thr Ala Val Leu Val Ala
1 5 10 15
Ala Val Glu Ser Leu Ser Cys Val Gln Cys Asn Ser Trp Glu Lys
20 25 30
Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn
35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
200 205 210
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
215 220 225
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

ggcctcggtt caaacgaccc ggtgggtcta cagcggaagg gagggagcga 50
aggtaggagg cagggtctgc ctcaactggcc accctcccaa ccccaagagc 100
ccagcccat ggtccccgcc gccggcgcgcg tgctgtgggt cctgctgctg 150

aatctgggtc	ccggggcggc	ggggggccaa	ggcctgacc	agactccag	200
cgaatcgag	cggttcagtt	tacgttttg	gggcccatt	accgcagct	250
accggagac	cgcccgact	ggtcttccc	ggaagacaag	gataatccta	300
gaggacaga	atgatgcat	ggccgagcc	gaccgcctg	ctggaccagc	350
ggctgccag	ctctggccg	ccacgggtg	caccggctt	agccggctg	400
ccgccattaa	cgaggaggat	gggtcttcag	aagaggggt	tgtgattaat	450
gcggaaaag	atagcaccag	cagagagctt	cccagtgcg	ctcccaatac	500
agcggggagt	tccagcacga	ggtttatag	caatagtcag	gagcctgaaa	550
tcaggctgac	tccaagcctg	ccgcgctccc	ccgggaggtc	tactgaggac	600
ctgccaggct	cgcaggccac	cctgagccag	tggtccacac	ctgggtctac	650
cccagcccg	tgcccgctac	cctcaccacc	agccatgcc	tctcctgagg	700
atctcgggct	ggtgctgatg	ccttggggcc	cgtggcactg	ccactgcaag	750
tcgggcacca	tgagccggag	ccggtctggg	aagctgcacg	gcctttccgg	800
gcgccttga	gttggggcgc	tgagccagct	ccgcacggag	cacaagcctt	850
gcacctatca	acaatgtccc	tgcaaccgac	ttcgggaaga	gtgcccctgt	900
gacacaagtc	tctgtactga	caccaactgt	gcctctcaga	gcaccaccag	950
taccaggacc	accactaccc	ccttcccacc	caccacccct	agaagcagtc	1000
ccagcctgcc	accgcccgag	cctgcccag	ccttggtctt	ttggaacgg	1050
gtcaggattg	gcctggagga	tatttggaat	agcctctctt	cagtgttcac	1100
agagatgcaa	ccaatagaca	gaaaccagag	gtaatggcca	cttcacccac	1150
atgaggagat	gtcagtatct	caacctctct	tgcctttcca	atcctagcac	1200
ccactagata	tttttagtac	agaaaaacaa	aactgaaaa	cacaa	1245

<210> 297

<400> 297

65										70										75									
Arg	Leu	Ala	Gly		Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val														
				80						85					90														
Ser	Thr	Gly	Phe		Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly														
				95						100					105														
Ser	Ser	Glu	Glu		Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr														
				110						115					120														
Ser	Arg	Glu	Leu		Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser														
				125						130					135														
Ser	Thr	Arg	Phe		Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu														
				140						145					150														
Thr	Ser	Ser	Leu		Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu														
				155						160					165														
Pro	Gly	Ser	Gln		Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser														
				170						175					180														
Thr	Pro	Ser	Arg		Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser														
				185						190					195														
Pro	Glu	Asp	Leu		Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His														
				200						205					210														
Cys	His	Cys	Lys		Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys														
				215						220					225														
Leu	His	Gly	Leu		Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln														
				230						235					240														
Leu	Arg	Thr	Glu		His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys														
				245						250					255														
Asn	Arg	Leu	Arg		Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr														
				260						265					270														
Asp	Thr	Asn	Cys		Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr														
				275						280					285														
Thr	Thr	Pro	Phe		Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu														
				290						295					300														
Pro	Pro	Ala	Ser		Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val														
				305						310					315														
Arg	Ile	Gly	Leu		Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe														
				320						325					330														
Thr	Glu	Met	Gln		Pro	Ile	Asp	Arg	Asn	Gln	Arg																		
				335						340																			

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

cccggtgcga cccacgcgtc cgaggagaaa ggaaggccgg cctggcggcg 50

ttgagagcct gccaccgtgt gtcgggagtg tgggccaggc tgagtgcata 1700
 ggtgacaggg ccgtgagcat gggcctgggt gtgtgtgagc tcaggcctag 1750
 gtgcgcagtg tggagacggg tgtgtcggg gaagagggtg ggcttcaaa 1800
 tgtgtgtgtg caggggggtg gtgtgttagc gtgggttagg ggaacgtgtg 1850
 tgcgcgtgct ggtgggcatg tgagatgagt gactgccgtg gaatgtgtcc 1900
 acagttgaga ggttgagca ggatgaggga atcctgtcac catcaataat 1950
 cacttgtgga gcgccagctc tgcccaagac gccacctggg cggacagcca 2000
 ggagctctcc atggccaggc tgcctgtgtg catgttccct gtctggtgcc 2050
 cctttgcccc cctcctgcaa acctcacagg gtccccacac aacagtgtcc 2100
 tccagaagca gccctcggg ggagaggaa ggaataatgg gatggctggg 2150
 gctctctcca tctcctttt ctcttgctc tgcagtggct ggcttcccc 2200
 tccaaaacct ccattccct gctgccaggc cctttgccat agcctgattt 2250
 tggggaggag gaaggggcga tttgaggag aaggggagaa agcttatggc 2300
 tgggtctggt ttcttccct cccagagggt cttactgttc cagggtggcc 2350
 ccagggcagg caggggccac actatgcctg tgccttggtg aaggtgacc 2400
 ctgcatttta ccagcagccc tggcatgttc ctgcccaca ggaatagaat 2450
 ggaggagctc ccagaaactt tccatcccaa aggcagtctc cgtggtttaa 2500
 gcagactgga tttttgtct gccctgacc cttgtccct ctttgaggga 2550
 ggggagctat gctaggactc caacctcagg gactcgggtg gctcgccta 2600
 gcttcttttg atactgaaaa cttttaaggt gggaggggtg caagggtatg 2650
 gcttaataaaa tcaattccaa gctcaaaaa aaaaaaaaa aa 2692

<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
 Met Ala Gly Leu Ala Ala Arg Leu Val Leu Leu Ala Gly Ala Ala
 1 5 10
 Ala Leu Ala Ser Gly Ser Gln Gly Asp Arg Glu Pro Val Tyr Arg
 20 25 30
 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe
 80 85 90
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro
 95 100 105
 Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val
 110 115 120
 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met
 125 130 135
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp
 140 145 150
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu
 155 160 165
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile
 170 175 180
 Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val
 185 190 195
 Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His
 200 205 210
 Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu
 215 220 225
 Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu
 230 235 240
 Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys
 245 250 255
 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu
 260 265 270
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala
 275 280 285
 Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser
 290 295 300
 Phe Leu Glu Asp Asp Ser Leu Tyr Leu Leu Lys Glu Ser Glu Asp
 305 310 315
 Lys Phe Lys Leu Asp
 320

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

ggcgcctgg aattgtggga gttgtgtctg ccactcggct gccggaggcc 50

gaaggtccgt gactatggct cccagagcc tgccttcac taggatggct 100

octctgggca tgctgcttgg gctgctgatg gccgcctgct tcaccttctg 150

cctcagtcac cagaacctga aggagtgtgc cctgaccaac ccagagaaga 200
gcagcaccaa agaacggag agaaaagaaa ccaaagccga ggaggagctg 250
gatgccgaag tctggagggt gtccaccg acgcatgagt ggcaggccct 300
tcagccaggg caggtgtcc ctgcaggatc ccacgtacgg ctgaatttc 350
agactgggga aagagaggca aaactccaat atgaggacaa gttccgaat 400
aatttgaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
ggatctcaag agtgactgg caaattcaa ggagggggca gagatggaga 500
gttcaaagga agacaaggca aggcaggctg aggtaaagcg gctctccgc 550
cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
gactgacatg cagatcatgg tacggctgat caacaagttc aatagttcca 650
gtccagcttt ggaagagaag attgctgctc tctttgatct tgaatattat 700
gtccatcaga tggacaatgc gcaggacctg ctttccttg gtggtcttca 750
agtgtgtatc aatgggctga acagcacaga gccctcctg aaggagtatg 800
ctgctgttgt gctgggctgc gccttttcca gcaaccccaa ggtccagggt 850
gagggccatg aagggggagc cctgcagaag ctgctgttca tctgtggcac 900
ggagcagcgc ctactgcaa agaagaaggc cctgtttgca ctgtgctccc 950
tgctgcgcca cttcccctat gccagcggc agttcctgaa gctcgggggg 1000
ctgcaggctc tgaggacct ggtgcaggag aagggcacgg aggtgctcgc 1050
cgtgcgcgtg gtcacactgc tctacacct ggtcacggag aagatgttgc 1100
ccgaggagga ggtgagctg acccaggaga tgtcccaga gaagctgcag 1150
cagtatgcc aggtacacct cctgccaggc ctgtgggaac agggctggtg 1200
cgagatcacg gccacctcc tggcgtgcc cgagcatgat gccgtgaga 1250
aggtgctgca gacactggc gtccctctga ccactgcgc ggaccgtac 1300
cgtcaggacc ccagctcgg caggacactg gccagcctgc aggtgagta 1350
ccaggtgctg gccagcctg agctgcagga tggtagaggc gagggtact 1400
tccaggagct gctgggctct gtcaacagct tgctgaagga gctgagatga 1450
ggccccacac caggactgga ctgggatgcc gctagtggg ctgaggggtg 1500
ccagctggg tgggcttctc aggcaggag acatcttggc agtgctggct 1550
tggccattaa atggaacct gaaggccaaa aaaaaaaaa aaaaaaaaa 1600
aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa 1650
aaaaaaaaa aaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	
1				5					10					15	
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	
			20						25					30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	
			35						40					45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	
			50						55					60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	
			65						70					75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	
			80						85					90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	
			95						100					105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	
			110						115					120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	
			125						130					135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	
			140						145					150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	
			155						160					165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	
			170						175					180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	
			185						190					195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	
			200						205					210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	
			215						220					225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	
			230						235					240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	
			245						250					255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	
			260						265					270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	
			275						280					285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe	

	290		295		300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys Leu Gly Gly Leu Gln Val	305		310		315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val	320		325		330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe	335		340		345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys	350		355		360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu	365		370		375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu	380		385		390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu	395		400		405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg	410		415		420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu	425		430		435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu	440		445		450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg	455		460		

<210> 302
 <211> 2136
 <212> DNA
 <213> Homo sapiens

<400> 302
 ttccgcttcc gtagaggaag tggcgcggac cttcatttgg ggtttcgggt 50
 ccccccttc cccttccccg ggtctgtggg gtgacattgc accgcgcccc 100
 tcgtggggtc gcgttgccac cccacgcgga cccccagct ggcgcgcccc 150
 tcccatttgc ctgtcctggt caggccccca ccccccttc cacctgacca 200
 gccatggggg ctgcgggtgtt ttctggctgc actttcgtcg cgttcggccc 250
 ggcccttcgq cttttcttga tcaactgtgc tggggaccgc cttcgcgcta 300
 tcactcctgt cgcaggggca tttttctggc tgggtctccot gctcctggcc 350
 tctgtgtgct ggttcattct ggtccatgtg accgacgggt cagatgcccg 400
 gctccagtag ggctcctga tttttggtgc tgctgtctct gctcctctac 450
 aggaggtgtt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500
 gggtagtagt cgctgagtga ggacggaaga tcacccatct ccatccgcca 550

gatggcctat gtttctggto tctccttcgg tatcatcagt ggtgtcttct 600
 ctgttatcaa tattttggct gatgcacttg ggcaggtgt ggttgggac 650
 catggagact caccctatta ctctcgtact tcagccttct tgacagcagc 700
 cattatcctg ctccataacct tttggggagt tgtgttcttt gatgcctgtg 750
 agaggagacg gtactgggct ttggggcctgg tggttgggag tcacctactg 800
 acatcgggac tgacattcct gaacctctgg tatgaggcca gcctgctgcc 850
 catctatgca gtoactgttt ccatggggct ctgggccttc atcacagctg 900
 gagggtccct ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950
 cctggactga tcgctgaca gatccacct gcctgtccac tgcccatgac 1000
 tgagcccagc cccagcccgg gtccattgcc cacattctct gtctccttct 1050
 cgtcgggtcta cccactacc tccaggggtt tgctttgtcc ttttgtgacc 1100
 gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcatgta 1150
 ctggtgggtt tgaatctgca cttatcccca ccacctgggg acccccttgt 1200
 tgtgtccagg actcccccctg tgtcagtgct ctgctctcac cctgcccaag 1250
 actcacctcc ctcccccctc gcaggccgac ggcaggagga cagtccgggtg 1300
 atggtgtatt ctgccctgcg catcccaccc gaggactgag ggaacctagg 1350
 ggggaccctc gggcctgggg tgccctcctg atgtcctgc cctgtatttc 1400
 tccatctcca gttctggaca gtgcaggttg ccaagaaaag ggacctagtt 1450
 tagccattgc cctggagatg aaattaatgg aggcotcaagg atagatgagc 1500
 tctgagtttc tcagtactcc ctcaagactg gacatcttgg tctttttctc 1550
 aggcctgagg gggaaacctt tttggtgtga taaataccct aaactgcctt 1600
 tttttctttt ttgaggtggg gggaggagg aggtatatgt gaactcttct 1650
 aaacctcctg ggctatatct tctctcctcg agttgctcct catggctggg 1700
 ctcatctcgg tccctttctc cttgggtccca gaccttgggg gaaagggaag 1750
 aagtgcattg ttgggaactg gcattactgg aactaatggt ttaacctcc 1800
 ttaaccacca gcatccctcc tctccccaag gtgaagtgga ggggtgctgtg 1850
 gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900
 atgacatcgt agggaagag gggagatttt tttgtagtgt ttaattgggg 1950
 tgtgggaggg gcggggaggt tttctataaa ctgtatcatt tctgtgtgag 2000
 ggtggagtgt cccatccttt taatcaaggt gattgtgatt ttgactaata 2050
 aaaaaaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303

Met	Gly	Ala	Ala	Val	Phe	Phe	Gly	Cys	Thr	Phe	Val	Ala	Phe	Gly	
1				5					10					15	
Pro	Ala	Phe	Ala	Leu	Phe	Leu	Ile	Thr	Val	Ala	Gly	Asp	Pro	Leu	
				20					25					30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
				35					40					45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	
				50					55					60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	
				65					70					75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	
				80					85					90	
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
				245											

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
aagctggttt aaggaagcag aggagggtta gattcgtga gtgaggacgg 50
aagatcaacc catttccatt ccgccagatg gcctatgttt ctggctcttc 100
ccttcggnat catcagtggg gtnttntctg ttatcaatat ttggctgat 150
gcanttgggc caggtgtggt tgggatccat ggagactcac cctattant 200
cotganttca gccttntga cagcagccat taccctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
gaccgaccgt tcagatgcc ggttccagta cggcttctgt atttttgggt 50
ctgctgtntc tgtccttcta caggaggtgt tccgctttgc ctantacaag 100
ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
atcaccatt tccatccgcc agatggccta tgtttntggt ntttctcttg 200
gtatcatcag tgggtgtttn tctgttatca atattttggn tgatgcantt 250
gggcaggtg tgggtgggat ccatggagan tcacctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt tccccctt 50
tccctttccc cgggtctctg ggtgacattg cacgggcccc tcgtggggtc 100
gcgttgccac cccacgcgga ctcccagnt ggnngccctt tccattttgc 150
ctgtctcgtt caggccccca ccccccttcc cacntgacca gccatggggg 200
ctgcggtgtt ttctggctgc actttcgtcg cgttcggccc ggccttcgcg 250

aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100
 gctggggagca aatccccac cccctacctg ggggacaggg caagtgagac 150
 ctgggtgaggg tgggtcagca ggcagggaag gagagtgctg tgtgcgtcct 200
 gcacccacat ctttctctgt cccctccttg cctgtctctg aggctgctag 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgcgat 300
 ggtggccogt ccttggtgtt cctctctacc tggggaata aggtgcagcg 350
 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
 tttctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500
 ctggggagctg gggccgggga agacgcccgg tcggatgaca gcagcagccg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
 cgctgttgct aaggccaac cagctctact gcggggcggt gttggtgat 650
 ccacagtggc tgctcacgc cggccactgc aggaagaaag ttttcagagt 700
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
 tgttcaggg ggtcaaatcc atccccacc ctggctactc ccacctggc 800
 cactctaag acctcatgct catcaaatc aacagaagaa ttcgtccac 850
 taaagtgtc agaccatca acgtctctc tcattgtccc tctgctggga 900
 caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
 ttccctaagg tcctccagtg cttgaatata agcgtgctaa gtcagaaaag 1000
 gtgcgaggat gcttaccga gacagataga tgacaccatg tctgcgccc 1050
 gtgacaaagc aggtagagac tcctgccagg gtgattctg ggggcctgtg 1100
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attaccttg 1150
 tgccccggcc aacagaccgg gtgtctacac gaacctctcg aagtccacca 1200
 agtggatcca ggaaaccatc caggccaaat cctgagtcac ccaggactc 1250
 agcacaccgg catccccacc tgetgcaggg acagccctga cactccttc 1300
 agaccctcat tcctcccag agatgttgag aatgttcac tcctccagccc 1350
 ctgaccccat gtctcctgga ctcagggtct gcttcccca cattgggtg 1400
 accgtgtctc tctagttgaa ccttggaac aatttccaaa actgtccag 1450
 gcgggggttg cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500
 ggcocattcc ttctctgcag ctctgaccca aatttagtcc cagaaataaa 1550
 ctgagaagtg gaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
1				5					10					15
Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn
			20						25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
			35						40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
			50						55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
			65						70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
				80					85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
			95						100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
				110					115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
				125					130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
				140					145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
				155					160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
				170					175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
				185					190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
				200					205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
				215					220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
				230					235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
				245					250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
				260					265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
				275					280					285
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcacatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
 atggtcaacg accggtggaa gaccatgggc ggcgctgccc aacttgagga 50
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgtgtgt ggccctgggt gtgctgtctg ctgtagctgt caccggtgcc 150
 gtgtctcttc tgaaccaacg ccacgcgccg ggcacggcgc cccacactgt 200
 cgtcagcact ggggctgcca gcgccaacag cgccttggtc actgtggaaa 250
 gggcgagacg ctgcacctc agcatcctca ttgaccogcg ctgccccgac 300
 ctccaccgaca gcttcgcacg cctggagagc gccaggcct cgggtgtgca 350
 ggcgctgaca gagcaccagg ccagccacg gctgggtggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggccccg 450
 gcctcagagc tcgagacgga gtgcatgggg ctgcggaagg ggcatggcac 500
 gctggggcag ggccctcagc ccctgcagag tgagcaggcg cgcctcatcc 550

gtcctcctac ctggggcagc cggggctgcc atcccatttc tctgcctct 2200
 ggaaggtggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250
 gctcttggtt ttctgggctg gggcctaggc agggctggga tgaggcttgt 2300
 acaaccccca ccaccaattt ccaggggact ccagggtcct gaggcctccc 2350
 agggaggcct tgggggtgat gaccccttcc ctgaggtggc tgtctccatg 2400
 agggaggcca cccttgccat tgaccgtggc cacctggacc caggccaggc 2450
 ccggcccgcc gagtgggcaa gggacaggga ccacctcacc gggcaaatgg 2500
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550
 ttgaatcctc ccaacaccca gcacgtgtgc atcccactc cttgtgtgca 2600
 cacatgcaga ggtgagaccc gcagggtccc aggaccagca gccacaaggg 2650
 cagggttgga gccgggtcct cagctgtctg ctgagcagcg ctggaccgcg 2700
 gtgctgttac tcaggccagc atgcaggggc gcttttccaa ggctcctga 2750
 tggggggctc cgaaagggtt ggagtcagcc ttggggagct gcctagcagc 2800
 ctctcctcgg gcaggagggg aggtggcttc ctccaaagga cccccgatgg 2850
 caggtgccta ggggtgtggg ggttccttc tccctccccc tccactgaa 2900
 gtttgtgttt aaaaaacaat aaatttgact tggcaccact gggggttgtt 2950
 gggagagggc gtgtgacctg gctctctgtc ccagtgccac caggteatcc 3000
 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu
 1 5 10
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu	Thr
110		115	120
Glu His Gln Ala Gln	Pro Arg Leu Val	Gly Asp Gln Glu Gln	Glu
125		130	135
Leu Leu Asp Thr Leu	Ala Asp Gln Leu	Pro Arg Leu Leu Ala	Arg
140		145	150
Ala Ser Glu Leu Gln	Thr Glu Cys Met	Gly Leu Arg Lys Gly	His
155		160	165
Gly Thr Leu Gly Gln	Gly Leu Ser Ala Leu	Gln Ser Glu Gln Gly	
170		175	180
Arg Leu Ile Gln Leu	Leu Ser Glu Ser	Gln Gly His Met Ala	His
185		190	195
Leu Val Asn Ser Val	Ser Asp Ile Leu Asp	Ala Leu Gln Arg Asp	
200		205	210
Arg Gly Leu Gly Arg	Pro Arg Asn Lys Ala	Asp Leu Gln Arg Ala	
215		220	225
Pro Ala Arg Gly Thr	Arg Pro Arg Gly Cys	Ala Thr Gly Ser Arg	
230		235	240
Pro Arg Asp Cys Leu	Asp Val Leu Leu Ser	Gly Gln Gln Asp Asp	
245		250	255
Gly Val Tyr Ser Val	Phe Pro Thr His Tyr	Pro Ala Gly Phe Gln	
260		265	270
Val Tyr Cys Asp Met	Arg Thr Asp Gly Gly	Gly Trp Thr Val Phe	
275		280	285
Gln Arg Arg Glu Asp	Gly Ser Val Asn Phe	Phe Arg Gly Trp Asp	
290		295	300
Ala Tyr Arg Asp Gly	Phe Gly Arg Leu Thr	Gly Glu His Trp Leu	
305		310	315
Gly Leu Lys Arg Ile	His Ala Leu Thr Thr	Gln Ala Ala Tyr Glu	
320		325	330
Leu His Val Asp Leu	Glu Asp Phe Glu Asn	Gly Thr Ala Tyr Ala	
335		340	345
Arg Tyr Gly Ser Phe	Gly Val Gly Leu Phe	Ser Val Asp Pro Glu	
350		355	360
Glu Asp Gly Tyr Pro	Leu Thr Val Ala Asp	Tyr Ser Gly Thr Ala	
365		370	375
Gly Asp Ser Leu Leu	Lys His Ser Gly Met	Arg Phe Thr Thr Lys	
380		385	390
Asp Arg Asp Ser Asp	His Ser Glu Asn Asn	Cys Ala Ala Phe Tyr	
395		400	405
Arg Gly Ala Trp Trp	Tyr Arg Asn Cys His	Thr Ser Asn Leu Asn	
410		415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430 435
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 315

cacacgtcca acctcaatgg gcag 24

<210> 316

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 316

gaccagcagg gccaaggaca agg 23

<210> 317

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 317

gttctctgag atgaagatcc ggcgggtccg ggagtaccgc ttag 44

<210> 318

<211> 1841

<212> DNA

<213> Homo sapiens

<400> 318

gcagtcagag acttccctcg cccctcgctg ggaaagaaca ttaggaatgc 50
 ctttttagtgc ctgtcttct gaactagctc acagtagccc ggcggcccag 100
 ggcaatccga ccacatttca ctctcaccgc ttaggaatc cagatgcagg 150
 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250
 gcgcacagag cacagggtc cctcttcaac gtggcgacca gtggccctga 300
 cctgtctgac tttgtgcttg gtgctgctga tagggtctgg agccctgggg 350
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaatg gaagaaagat taggaaatag gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag ctctgcaggaa gtctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
 ttgtacagaa caatggaaat ggcattggaga caattgtac cagtctctata 600
 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaatac 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700
 tcagagctac totgagtttt tctactctta ttggacaggg cttttgcgcc 750
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc ttctactctt 800
 gaactgttcc atattataat agatgtccac agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tggatgaagc agagagcctc 950
 catgtccccc ctgaacatt aggcgaaggt gactgattcg cctctgcaa 1000
 ctacaaatag cagagtgcgc caggcgtgac caagcaagg gctagttag 1050
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100
 aaaatgggtt ctctgttttc ctgttcagga tcaccagcat ttctgagctt 1150
 ggggtttatgc acgtatttaa cagtcacaag aagctctatt tacatgccac 1200
 caaccaacct cagaacccca taatgtcacc tgcctctctg gcttagagat 1250
 aacttttagc tctctttctt ctcaatgtct aatatcacct cctgttttc 1300
 atgtcttctt tacacttggg ggaataagaa actttttgaa gttagaggaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400
 ttggcagtca ctccccagat tgtaccagca aatacacaag gaattctttt 1450
 tgtttgttcc agtccatact agtcccttcc caatccatca gtaagagccc 1500
 catctgcctt gtccatgcgc ttccccaaca gggatgtcac ttgatagtag 1550
 aatctcaaat ctcaatgcct tataagcatt ccttctctgt tccattaaga 1600
 ctctgataat tgtctccctt ccataggaat ttctccagg aaagaaatat 1650
 atccccatct ccgtttcata tcagaactac cgteccogag attcccttca 1700
 gagagattaa agaccagaaa aaagtgcgc tottcatctg cacctgtaat 1750
 agtttcagtt cctattttct tccattgacc catatttata cctttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
1				5					10					15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
gggacatgnt ggtgatgat gggacaccac catgagcctg cattntcaag 100
cttttggccac aattggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgtt 200
ggtgtgtctg atagggtctg cagccctggg gcttttgttt ttccagtact 250
accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
ttaggaaata cgtccaaga gttgcaattt nttcaagtcc agaataataa 350
gcttgacgga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcantact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atgcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgtgtgac acttctgtca agc 23

<210> 323
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tctgtttttt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctggatg atgatgggga caccacatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgcggc tccggggatt cggctcgggc cgctggctct gctctgcggg 100
gagggagcgg gcccgccgcg gggggccgag ccctccggat cggccccctc 150
cccggtcccg cccctcggga gactcctctg gctgctctgg gggttcgcgg 200
gggcccggga cccgcggtcc gggcgccatg cgggcacgcg tctgctgtgc 250
ggtgctgcgg cccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300
ccctgagcct gctcagcgtc acctgggtgg agggagccgt cggcccagcg 350
ccgccccaac ctggagactc tgagctgcgg ccgcgcgga acaccaacgc 400
ggcgcgccgg cccaactcgg tgcagcccgg agcggagcgc gagaagcccc 450
gggcccggca aggcgccggg gagaattggg agccgcgcgt cttgccttac 500
caccctgcac agcccgcca gcccgccaaa aagccgtca ggaccgccta 550
catcagcacg gagctgggca tcaggcagag gctgctgggt gcggtgctga 600
cctctcagac cagctgccc acgctgggcg tggccgtgaa ccgcacgctg 650
gggcaaccgc tggagcgtgt ggtgttcctg acgggcgcac ggggcccgcg 700
ggccccacct ggcatggcag tggtagcgtt gggcgaggag cgaccattg 750
gacacctgca cctggcgtg cgcacacctg tggagcagca cggcgagcac 800
tttgactggt tcttcctggt gctgacacc acctacacc aggcgcacgg 850
cctggcacgc ctaactggcc acctcagcct ggctccgcc gccacacctg 900
acctggcgcg gccccaggac ttcacgcggg gagagccca ccccgccgcg 950
tactgccacg gaggctttgg ggtgctgctg tcgcgcatg tctgcaaca 1000
actgcgcccc cacctggaag gctgccgcaa cgacatcgt agtgcgcgcc 1050
ctgacgagtg gctgggtcgc tgcattctcg atgccaccgg ggtgggtcgc 1100
actggtgacc acgagggggg gcactatagc catctggagc tgagccctgg 1150
ggagccagtg caggaggggg accctcattt cgaagtgcg ctgacagccc 1200
accctgtgcg tgacctgtg cacatgtacc agctgcacaa agctttccgc 1250
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
 ggcctgtggg tattccagca ccatcccccg cgccctcccg ctttgagggtg 1400
 ctgcgtgtgg actacttcac ggagcagcac gctttctcct gcgccgatgg 1450
 ctcaccccgc tgccactgc gtggggtga ccgggctgat gtggccgatg 1500
 ttctggggag agctctagag gagctgaacc gccgctacca ccggccttg 1550
 cggctccaga agcagcagct ggtgaatggc taccgagcct ttgatccggc 1600
 ccggggtatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650
 agggaggcgc ccggccctc actcgccgag tgcagctgct ccggccgctg 1700
 agccgctggg agatcttgcc tgtgccctat gtcactgagg cctcactgct 1750
 cactgtgctg ctgcctctag ctgcggtga cgtgacctg gccctgggct 1800
 tcttgagggc ctttgccact gcagcactgg agcctggtga tgcctggcca 1850
 gccctgacc tgctgctact gtatgagccg cgccaggccc agcgcgtggc 1900
 ccattgcagat gtcttcgcac ctgtcaaggc ccactggga gagctggagc 1950
 ggcgtttccc cgtgcccgg gtgccatggc tcagtgtgca gacagccgca 2000
 ccctcaccac tgccctcat ggtctactc tccaagaagc acccgctgga 2050
 cactactgtc ctgctggccg gccagacac ggtgctcag cctgacttcc 2100
 tgaaccgctg ccgcatgcat gccatctcc gctggcaggc cttctttccc 2150
 atgcatttcc aagccttcca ccaggtgtg gccccaccac aagggcctgg 2200
 gcccccagag ctgggcctg acactggccg ctttgatgc caggcagcca 2250
 ggcggcctg cttctacaac tccgactaag tggcagcccg tgggcgctg 2300
 ggcgcagcct cagaacaaga agaggagctg ctggagagcc tggatgtgta 2350
 cgagctgttc ctccacttct ccagtctgca tgtgctgcg gcggtggagc 2400
 cggcgctgct gcagcgtac cgggccagca cgtgcagcgc gaggtcagt 2450
 gaggaacctg accacgctg cctccagagc gtgcttgagg gcctcggtc 2500
 ccgaacccag ctggccatgc tactctttga acaggagcag ggcaacagca 2550
 cctgacocca ccctgtccc gtggccctg gcatggccac accccacccc 2600
 acttctcccc aaaaaccaga gccacctgcc agcctcgctg ggcagggtg 2650
 gccgtagcca gacccaagc tggcccactg gtcccctctc tggctctgtg 2700
 ggtccctggg ctctggacaa gcactggggg acgtgcccc agagccaccc 2750
 acttctcatc caaaaccag ttccctgcc cctgaagct gctgattcgg 2800
 gctgtggcct ccacgtattt atgcagtaca gtctgctga cgccagccct 2850
 gcctctgggc cctgggggct gggctgtaga agagtgttg gggaaggagg 2900

gagctgagga gggggcatct cccaacttct ccccttttggga ccctgccgaa 2950

gtccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro
1			5						10					15
Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser
			20						25					30
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
			35						40					45
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg
			50						55					60
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly
			65						70					75
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro
			80						85					90
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg
			95						100					105
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu
			110						115					120
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val
			125						130					135
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe
			140						145					150
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val
			155						160					165
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala
			170						175					180
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe
			185						190					195
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala
			200						205					210
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr
			215						220					225
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly
			230						235					240
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu
			245						250					255
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile
			260						265					270

Val Ser Ala Arg	Pro Asp Glu Trp Leu	Gly Arg Cys Ile Leu	Asp
	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His	Tyr
	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly	Asp
	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp	Pro
	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu	Leu
	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile	Gln
	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala	Trp
	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe	Glu
	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser	Cys
	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg	Ala
	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn	Arg
	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val	Asn
	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr	Leu
	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg	Pro
	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val	Glu
	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr	Val
	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly	Phe
	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala	Ala
	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr	Glu Pro Arg Gln Ala	Gln
	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His	Val
	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp	Leu
	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp Leu
	590	595 600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala Gly
	605	610 615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg Met
	620	625 630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe Gln
	635	640 645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro Pro
	650	655 660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala Ser
	665	670 675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly Arg
	680	685 690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser Leu
	695	700 705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val Leu
	710	715 720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln Thr
	725	730 735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu Gln
	740	745 750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met Leu
	755	760 765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr
	770	775

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgaatgtctg 20

<210> 329

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcatgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggcgc gccccggcga ttggtcacgc cccgctaggg gacagccctg 50
gcctcctctg attggcaagc gctggccacc tccccacacc ccttgcaaac 100
gctcccctag tggagaaaag gagtagctat tagccaattc ggcaggggccc 150
gcttttttag agcttgattt cctttgaaga tgaagacta gcggaagctc 200
tgctcttttc ccagtgggc gagggaaactc ggggcgattg gctgggaact 250
gtatccacc aaatgtcacc gattttcttc tatgcaggaa atgcagcagc 300
ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 ccgccccga gacctgcag caccatctgt catggcgctt gggctgtttg 550
 gtttgagcgc tcgcgtctt ttggcggcag cggcgacgcg agggctccc 600
 gccgccccgc tccgctggga atctagcttc tccaggactg tggctgcccc 650
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750
 catggttatg acaaggacc cgttttggac gtctggaaca tgcgacttgt 800
 cttctctttt ggcgtctcca tcatctctgt ccttggcagc accttgttgg 850
 cctatctgcc tgactacag atgaaagagt ggtcccgccg cgaagctgag 900
 aggtgttgta aataccgaga ggccaatggc cttcccatca tggaatccaa 950
 ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
 ctaagtgggg ctcaagaagc accgccttcc ccacccctcg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 334
 Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala
 1 5 10 15
 Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu
 20 25 30
 Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly
 35 40 45
 Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu
 50 55 60
 Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly
 65 70 75
 Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val
 80 85 90
 Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe
 95 100 105
 Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg
 110 115 120
 Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro
 125 130 135
 Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro
 140 145 150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgttttggt tgagcgctcg cgtcttttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgcgccc gctgggaatc tagcttctcc 100
aggactgtgg tcgcccgcgc cgctgtggcg ggaagcggc cccagaacc 150
gaccacacog tggcaagagg acccagaacc cgaggacgaa aacttgatg 200
agaagaacc agactcccat ggttatgaca aggaccccg tttggacgtc 250
tggaacatgc gacttgctt cttctttggc gtcctcatca tcttggtcct 300
tggcagcacc tttgtgcct atctgcctga ctacaggatg aaagagtgg 350
cccgccgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagacccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggcta tgccgcttgc tctgctcgtc ctgttgctcc tggggcccg 50
cggttggtgc cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100
tcacacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacagct 200
ctttccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgacactgtc attcacaaa ggcttttgga ggaccgcata ctgggggcca 300
cccttctcgc agggcccatc aggtgcagag ctgtgggtct ggtccaaga 350
cactgtcact gatgtgata aatcttgga ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
actcccactg cctccttcaa acccctgggt ctggccaatg aactgacca 500
ctaactttctg cgtatgtctg tgcctgcgcg ggaggtggtc tgcacgaaa 550
acotacccc ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600
tctgtgtgc tgaaggcaga tcgcttgctc cacaccagct accactccca 650
ggcagtgcat atccgccctg tttgcagaaa tgcacgctgt actagcatct 700
cctgggagct gaggcagacc ctgtcagttg tatttgatgc ctcatcacg 750
gggcagggaa agaaagactg gtccctcttc cggatgttct ccgaacct 800
cacggagccc tgccccttg cttcagagag ccgagtctat gtggacatca 850
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatata aggacgtcat ctaggcact cggaagacct atgcaccta 950
tgacttgctt gacaccgcca tgatcaaaa ctctcgaaac ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaatg agggccccc agtgccttc 1050
ctgcatgcc agcggtacgt gagtggctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata ccgggccttc ccggtgctgc 1150
tgctggacac cgtaccctg tatctgggc tgtatgtgca caccctcacc 1200
atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
tgccaggac cggtgcaac cccacctct ggagatgctg attcagctgc 1300
cgccaactc agtcaccaag gtttccatcc agtttgagcg ggcgtgctg 1350
aagtggacg agtacagcc agatcctaac catggcttct atgtcagccc 1400
atctgtctc agcgccttg tgccagcat ggtagcagc aagccagtgg 1450
actgggaaga gagtccctc ttcaacagc tgttccagct ctctgatggc 1500

tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
tggtggccgt gtgctaeggc tcttcttaca atctcctcac ccgaaccttc 1650
cacatcgagg agccccgcac aggtggcctg gccaaagcggc tggccaaact 1700
tatccggcgc gcccgaggtg tccccccact ctgattcttg ccctttccag 1750
cagctgcagc tgcggtttct ctctggggag gggagcccaa gggctgtttc 1800
tgccacttgc tctcctcaga gttggtttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttcct cacctgtagt 1950
ggccacctct atattgaggt gctcaataag caaaagtgtg cggtggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaagtgga tgggggtgtc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttcctgtg 2150
aaaaaaaa aa 2162

<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Gly Pro Gly Gly
1 5 10 15
Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His	Tyr
	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr	Glu
	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys	Ala
	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr	Ser
	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn	Ala
	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser	Val
	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp	Ser
	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro	Leu
	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn	Gln
	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr	Tyr
	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr	Asp
	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn	Ile
	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro	Val
	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu	Gln
	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr	Arg
	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu	Arg
	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu	Asn
	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu	Gln
	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser	Val
	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp	Thr
	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro	Ser
	455	460	465

<400> 344
 caacatgggg tccagcagct tcttggtcct catggtgtct ctctttcttg 50
 tgaccctggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttgcccag ctgacaacgt acgctgcttc aagtcgcgac ctccccagtg 150
 tcacacagac caggactgtc tgggggaaag gaagtgtgtg tacctgcact 200
 gtggtctcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaaac 250
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
 gtgtccagge tctctctcta ccagggtgtcc tcagaaatga tgcgtgggtcc 350
 tttctacetc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400
 gagacttga ataatgaaga agcaataccc aaccccacca aagaaaaacct 450
 gagcttgaag tctttttccc caaaaaggagg gaagagtcac aaaaagtcca 500
 gacccacaggg acggtacttt cctctctac ctggtgtctc tccctaattgc 550
 tcataatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
 aaagagctgc ctgtcccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcagagaag aaaaactggt cctcaccaga tgctgaatct gctgtgtgct 700
 tgatcttga cttcccagcc tctagaactg taagaaataa atatttgcgt 750
 tttataatcc aa 762

<210> 345
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
 1 5 10 15
 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
 20 25 30
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
 80 85 90
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
 110

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
 aaactcagca cttgccggag tggetcattg ttaagacaaa ggggtgtgcac 50
 ttctctggcca ggaaacctga gcggtgagac tccagctgc ctacatcaag 100
 gcccacaggac atgcagaacc ttctctctaga acccgaccac ccaccatgag 150
 gtctctgcctg tggagatgca ggcacctgag ccaagcgctc cagtgtgtcct 200
 tgctcttgge tgtcctgggc ttctttctct tgccttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaaccattaa 300
 agaaaggctt ctacagtccc tggcaaagcc taagtcccag gcaccacaaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaaccagcc caaggccccc accaccggag acagaggaaa 450
 ggaggccaac caggcaccgc cggaggagca ggacaagggt cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 acactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggcacaatca tggaagagcc aggacacaaa gacgacccaa ggaatgggg 650
 gccagaccag gaagctgacg gcctccagga cggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagaagctc attccaaaa gtacgacag 750
 aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatcca cctaaggaga agaaacctca ggccacccca 850
 cccctgtccc ctttccagag cccacgacg cagagaaacc aaagactgaa 900
 ggccgccaac ttcaaactg agcctcgggt ggattttgag gaaaaatata 950
 gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050
 tctcttctgt gactccagac acttcaacca gagtgtgtgg gaccgcctgg 1100
 aacactttgc accacccttt ggcttcatgg agctcaacta ctcttgggtg 1150
 cagaaggtog tgacacgctt cctccagtg ccccgacagc agctgtctct 1200
 ggccagcctc ccgctggga gcctccgggt catcacctgt ccggtgtgtg 1250
 gcaacggggg catcctgaac aactcccaca tgggccagga gatagacagt 1300
 cagcactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350
 ggatgtgggg actcggacat ccttctacg ctttaccgcc ttctccctga 1400
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttcctg gaaggcaccg gggactatga 1500
 gtggctggaa gcaactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctggttcag gcacagaccc caggaagcctt ttcgggaagc cctgcacatg 1600
 gacagggtacc tgttgctgca ccagacttt ctcgataca tgaagaacag 1650
 gttttctgagg tctaagaccc tggatggtgc ccactggagg atataccgcc 1700
 ccaccaactg ggcctcctg ctgctcactg cccttcagct ctgtgaccag 1750
 gtgagtgtctt atggcttcat cactgagggc catgagcgct tttctgatca 1800
 ctactatgat acatcatgga agcggtgat cttttacata aaccatgact 1850
 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
 cggtctgtacc agcgtcctgg tcccggaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctcccttgct gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccatggctca gactaagctc 2050
 caagcccttc aggagtcca agggaaact tgaacctagg acaagactct 2100
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
 ctgtagggtcc tgaggccagg gatttttaaat taaatgggt gatgggtggc 2200
 caataaccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaatc ttgaaggtat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtcctgtc tttaagctat ttgacaactc tacgtgttgt 2450
 agaaaactga taataatata aatgattgtt gtccatggaa aggcataata 2500
 attttctaca gtgaaaaaaaa aaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10 15
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

65										70					75				
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr					
				80					85					90					
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn					
				95					100					105					
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln					
				110					115					120					
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn					
				125					130					135					
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg					
				140					145					150					
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln					
				155					160					165					
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val					
				170					175					180					
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu					
				185					190					195					
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val					
				200					205					210					
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro					
				215					220					225					
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe					
				230					235					240					
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn					
				245					250					255					
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe					
				260					265					270					
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile					
				275					280					285					
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn					
				290					295					300					
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp					
				305					310					315					
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu					
				320					325					330					
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val					
				335					340					345					
Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu					
				350					355					360					
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn					
				365					370					375					
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe					

ctttatacac atccccctcat ggacaagaga tttatTTTTg cagacagact 400
 cttccataag tcctttgagt ttgtatgtt gttgacagtt tgcagatata 450
 tattcgataa atcagtgtag ttgacagtgt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val
 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
 gggctggggcc ccgccgcagc tccagctggc cggtttggtc ctgcggtccc 50
 ttctctggga ggcccgaccc cggccgcgcc cagcccccac catgccaccc 100
 gccggggctcc gccggggcgc gccgctcacc gcaatcgctc tgttgggtgct 150
 ggggggctccc ctgggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg gggtttaact gcgagttctt cacctctgc 250
 tgcgggacct gctaccatcg gtactgtgc agggacctga ccttgcctat 300
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350
 caggcatcgc ctcagctgtg atcctctttg ttgctgtggt tgccaccacc 400
 atctgtgctt tcctctgttc ctgttgctac ctgtaccgcc gccgccagca 450
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggatccccag 500
 tgcagccagt ataccatac cccagagacc ccaaagctgg ccctgcaccc 550
 ccacagcctg gtttcatgta cccacctagt ggtcctgctc cccaatatcc 600

actctaccca gctgggcccc cagtctacaa ccctgcagct cctcctccct 650
 atatgccacc acagccctct taccgaggag cctgaggaaac agcccatgtc 700
 tctgtgtccc cttcagtgat gccaaccttg ggagatgccc tcatcctgta 750
 cctgcatctg gtctctggggg tggcaggagt cctccagcca ccaggcccca 800
 gaccaagcca agccctgggc cctactgggg acagagcccc agggaagtgg 850
 aacaggagct gaactagaac tatgaggggt tggggggagg gcttgggaatt 900
 atggcgtatt tttactgggg gcaagggagg gagatgacag cctgggtcac 950
 agtgccctgt ttcaaatagt cctctgtctc ccaagatccc agccaggaag 1000
 gctggggccc tactgtttgt cccctctggg ctgggggtggg gggaggagg 1050
 aggttccgtc agcagctggc agtagccctc ctctctgggt gccccactgg 1100
 ccacatctct ggcctgctag attaaagctg taaagacaaa a 1141

<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 351
 Met Pro Pro Ala Gly Leu Arg Arg Ala Ala Pro Leu Thr Ala Ile
 1 5 10 15
 Ala Leu Leu Val Leu Gly Ala Pro Leu Val Leu Ala Gly Glu Asp
 20 25 30
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe
 35 40 45
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
 155 160 165
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn
 170 175 180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

<400> 352
gggggagcta ggccggcggc agtgggtggtg gcggcggcgc aagggtgagg 50
gcggcccccag aaccccaggt aggtagagca agaagatggt gtttctgccc 100
ctcaaatggt cccttgcaac catgtcattt ctactttcct cactgttggc 150
tctottaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
caaaaactgat tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
cacgctgacc ttctggggaa ccacgaaagt agaatacaca gccagtcagc 350
ccaccagcac catcatcctg catagtccac acctgcagat atctagggcc 400
accctcagga agggagctgg agagaggcta tcggaagaac cctgcaggt 450
cctggaacac cccctcagg agcaaatgac actgctggct cccgagcccc 500
tccttgtcgg gctccgtac acagttgtca ttactatgc tggcaatctt 550
tcggagactt tcacaggtt ttacaaaagc acctacagaa ccaaggaagg 600
ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650
tggcctttcc ctgctttgat gaacctgcct tcaaaagcaag tttctcaatc 700
aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750
gaaatctgtg actgtttgtg aaggactcat agaagaccat ttatgatgtc 800
ctgtgaagat gagcacctat ctggtggcct tcactcattc agattttgag 850
tctgtcagca agataaccaa gagtggagtc aagggtttctg tttatgctgt 900
gccagacaag ataaatcaag cagattatgc actggatgct gcggtgactc 950
ttctagaatt ttatgaggat tatttcagca taccgtatcc cctaccocaa 1000
caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
cttctgcatc aagtaagctt ggcatoacag tgactgtggc ccatgaactg 1150
gccaccagat ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
ttggctaaat gaaggatttg ccaaatttat ggagtttggt tctgtcagtg 1250
tgaccatccc tgaactgaaa gttggagatt atttcttttg caaatgtttt 1300

gacgcaatgg aggtagatgc tttaaattcc tcacacctg tgtctacacc 1350
 tgtggaaaaa cctgctcaga tcoggagat gtttgatgat gtttcttatg 1400
 ataagggagc ttgtattctg aatatgctaa gggagtatct tagcgctgac 1450
 gcatttaaaa gtggtattgt acagtatctc cagaagcata gctataaaaa 1500
 taaaaaaac gaggacctgt gggatagtat ggcaagtatt tgccctacag 1550
 atggtgtaaa agggatggat ggcctttgct ctagaagtoa acattcatct 1600
 tcatcctcac attggcatca ggaaggggtg gatgtgaaaa ccatgatgaa 1650
 cacttggaac ctgcagaggg gttttccctc aataaccatc acagtgaggg 1700
 ggaggaatgt acacatgaag caagagcact acatgaaggg ctctgacggc 1750
 gccccggaac ctgggtacct gtggcatggt coattgacat tcatcaccag 1800
 caaatccaac atggtccatc gatttttgct aaaaaaaaa acagatgtgc 1850
 tcatctccc agaagagtg gaatggatca aatttaatgt gggcatgaat 1900
 ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950
 ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
 tcattaacaa tgcatttcag ctogtcagca ttgggaagct gtccattgaa 2050
 aaggccttgg atttatccct gtacttgaaa catgaaactg aaattatgcc 2100
 cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaattggaga 2150
 aaagagatat gaatgaagtg gaaactcaat tcaaggcctt cctcatcagg 2200
 ctgctaaggg acctcattga taagcagaca tggacagacg agggctcagt 2250
 ctacagacaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300
 actatcagcc gtgcgtacag agggcagaag gctatttcag aaagtggaa 2350
 gaatccaatg gaaacttgag cctgcctgtc gacgtgaact tggcagtggt 2400
 tgcgtgtggg gccagagca cagaaggctg ggattttctt tatagtaaat 2450
 atcagtttct ttgtccagt actgagaaaa gccaaattga atttgccctc 2500
 tgcagaacct aaaaaaagga aaagcttcaa tggctactag atgaaagctt 2550
 taaggagatg aaaaaaaaa ctacaggagt tccacaaatt ctacactca 2600
 ttggcaggaa ccagtagga taacctctg cctggcaatt tctgaggaaa 2650
 aactggaaca aacttgtaaa aaagtgtgaa ctgtgctcat ctccatagc 2700
 ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750
 aagaggtaaa aggattcttc agctcttga aagaaaatg ttctcagctc 2800
 cgttgtgtcc aacagacaat tgaaaccatt gaagaaaaaa toggttggat 2850
 ggataagaat ttgtataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900

aacgtatgta aaaattcctc ccttgcccg ttcctgttat ctctaatacac 2950
 caacattttg ttgagtgtat tttcaaaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
 aaagaatagc tgtagtttt tcatgaatgg gctttttcat gaatgggcta 3100
 tcgtaccat gtgttttgtt catcacaggt gttgcctgc aacgtaaacc 3150
 caagtgttg gttccctgcc acagaagaat aaagtacctt attcttctca 3200
 aaaaaaaaa aaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe
 1 5 10 15
 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

845	850	855
Asn Trp Asn Lys Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser	Ser
860	865	870
Ile Ala His Met Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	Arg
875	880	885
Thr Arg Leu Glu Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	Glu
890	895	900
Asn Gly Ser Gln Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	Ile
905	910	915
Glu Glu Asn Ile Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	Arg
920	925	930
Val Trp Leu Gln Ser Glu Lys Leu Glu	Arg Met	
935	940	

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
 cagccacaga cggttcacga ggcgggtatt actgctggcc ctctctgggt 50
 tcctcctccc actgccagga gtgcaggcgc tgcctcgcca gtttgggaca 100
 gttcagcatg tgtggaaggt gtccgaccta ccccggaat ggaccctaa 150
 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgctca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaaaggacc aggagccccg cgtcactgag caccggatgg gcccggcct 300
 ctccctgac tcctacacct tcgtgtgcc ccaggaggac ttctgcaaca 350
 acctcgtaa ctccctccc ctttggggcc cacagcccc agcagacca 400
 ggatccttga ggtgccaggt ctgcttgtct atggaaggct gtctggaggg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tcctcaggct caggggagga ggcactctct ccaatctgag agtccaggga 550
 tgcatgcccc agccaggttg caacctgctc aatgggacac aggaatttg 600
 gcccggtggg atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcggggggac caccattatg acacacggaa acttgggctca agaaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactggt ggggctcaaa attccagaa gaccaccatc 850
 cactcagccc ctctctgggt gcttggggcc tcctataccc acttctgtct 900
 ctccgacctg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950

tccctcctca agctgcccct gtcccaggag accggcagtg tcctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgcc 1050
 cagggggccc actcattggt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcagggct gcgtggccca accttcacgc 1150
 ttcttggtga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctctg cctctcagca tgagggaggt ggggctgagg 1250
 gcctggagtc tctcacttg ggggtggggc tggcactggc cccagcgtg 1300
 tgggtggggag tggtttgccc ttctgctaa ctctattacc cccacgattc 1350
 ttcaccgctg ctgaccaccc acaactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcattctc 1450
 cccacacaca atcattcata tctactcaco taacagcaac actggggaga 1500
 gcctggagca tccggacttg cctatggga gaggggacgc tggaggagtg 1550
 gctgcattga tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro	1	5	10	15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln	20	25	30	
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys	35	40	45	
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met	50	55	60	
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly	65	70	75	
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg	80	85	90	
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg	95	100	105	
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp	110	115	120	
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val	125	130	135	
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile	140	145	150	
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu				

155	160	165
Arg Gly Gly Gly	Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met
	170	175
Pro Gln Pro Gly	Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile Gly
	185	190
Pro Val Gly Met	Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu Thr
	200	205
Cys His Arg Gly	Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln
	215	220
Glu Pro Thr Asp	Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu Val
	230	235
Gly Gln Val Cys	Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly Leu
	245	250
Thr Ser Thr Leu	Val Gly Thr Lys Gly	Cys Ser Thr Val Gly Ala
	260	265
Gln Asn Ser Gln	Lys Thr Thr Ile His	Ser Ala Pro Pro Gly Val
	275	280
Leu Val Ala Ser	Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys Asn
	290	295
Ser Ala Ser Ser	Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro Gln
	305	310
Ala Ala Pro Val	Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val Gln
	320	325
Pro Leu Gly Thr	Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys Pro
	335	340
Arg Gly Ala Thr	His Cys Tyr Asp Gly	Tyr Ile His Leu Ser Gly
	350	355
Gly Gly Leu Ser	Thr Lys Met Ser Ile	Gln Gly Cys Val Ala Gln
	365	370
Pro Ser Ser Phe	Leu Leu Asn His Thr	Arg Gln Ile Gly Ile Phe
	380	385
Ser Ala Arg Glu	Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln His
	395	400
Glu Gly Gly Gly	Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly Val
	410	415
Gly Leu Ala Leu	Ala Pro Ala Leu Trp	Trp Gly Val Val Cys Pro
	425	430
Ser Cys		

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 356
 gcgacgggca ggacgccccg ttgccttagc gcgtgctcag gagttggtgt 50
 cctgcctcgc ctccagatga gggggaatct ggccctgggt ggcggtctaa 100
 tcagcctggc ctctctgtca ctgtgccat ctggacatcc tcagccggct 150
 ggcgatgacg cctgctctgt gcagatcctc gtcctctggc tcaaggggga 200
 tgccggagag aaggagaca aaggcgcccc cggacggcct ggaagagtcg 250
 gcccacaggg agaaaaagga gacatggggg acaaggaca gaaaggcagt 300
 gtgggtcgtc atggaaaaat tggccccatt ggctctaaag gtgagaaagg 350
 agattccggt gacataggac ccctgggtcc taatggagaa ccaggcctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtccggcg 500
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550
 gctacgcgga cggccagctg tcttgccagg gcccgggggg cacgctgagc 600
 atgcccaagg acgaggctgc caatggcctg atggccgat acctggcgca 650
 agccggcctg gcccggtgtc tcatcgcat caacgacctg gagaaggagg 700
 gcgccttcgt gtactctgac cactccccca tgcggacctt caacaagtgg 750
 cgcagcgttg agccaacaa tgcctacgac gaggagact gcgtggagat 800
 ggtggcctcg ggcggtgga acgacgtggc ctgccacacc accatgtact 850
 tcatgtgtga gtttgacaag gagaacatgt gagcctcagg ctggggctgc 900
 ccattggggg cccacatgt cctgcaggg ttggcaggga cagagcccag 950
 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
 tgagtagagg gctgtgtctt aaactgagaa aatggcctat gcttaaggag 1050
 aaaatgaaag tgctcctggg gtgctgtctc tgaagaagca gatttcatt 1100
 acctgtattg tagcccaat gtcattatgt aattattacc cagaattgct 1150
 ctccataaa gcttgtgctt ttgtccaagc tatacaataa aatctttaag 1200
 tagtgacgta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1 5 10 15
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	45
				35						40					
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	60
				50						55					
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	75
				65						70					
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	90
				80						85					
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	105
				95						100					
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	120
				110						115					
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	135
				125						130					
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	150
				140						145					
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	165
				155						160					
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	180
				170						175					
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	195
				185						190					
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	210
				200						205					
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	225
				215						220					
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	240
				230						235					
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	255
				245						250					
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	270
				260						265					

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

agtgactgca gccttccctag atccctccca ctccgtttct ctctttgcag 50

gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100

gttctctgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
tagctcagag ctttggggct gtctgtaagg agccacagga ggagggtgtt 250
cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
gagactcttc aaaagccact catctctgga gggattgtct aaagccctga 350
gccaggctag cacagatcct aaggaatcaa catctccga gaaacgtgac 400
atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
gggaagaca ggacctttct taccttcagt gagggttcct cgcccccctc 500
atcccaatca gcttggatcc acaggaaagt cttccctggg aacagaggag 550
cagagacott tataagactc tctacggat gtgaatcaag agaacgtccc 600
cagctttggc atcctcaagt atcccccgag agcagaatag gtactccact 650
tcggactgcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
cagggtgcga cgctcctgtt accctttctc ttcctgttc ttgtaacatt 750
cttgtgcttt gactccttct ccatcttttc tacctgacct tgggtgtgaa 800
actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
ctagagtccc tgtagtgtcc tacattaaaa atataatgto tctctctatt 900
cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
<211> 135
<212> PRT
<213> Homo sapiens

<400> 359
Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
1 5 10
Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
20 25 30
Val Pro Gly Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
35 40 45
Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
50 55 60
Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
65 70 75
Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
80 85 90
Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
95 100 105
Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
110 115 120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
ggcgctctcc ggctgctcct attgagctgt ctgctcgctg tgcgcgctgt 50
gcctgctgtg ccgcgctgt cgcgcgtgct accgcgtctg ctggacgcgg 100
gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150
agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtggagc catgagctgc gtctctgggtg gtgtcatccc ctgggggctg 250
ctgttctctg tctcgggatc ccaaggctac ctctgcccc acgtcactct 300
cttagaggag ctgctcagca aataccagca caacaggtct cactcccggg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
aacaagcttc gggggcagggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggccttg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatgctt ggctcagggt ctctcttgcc aggggagat ccgcgctctg 600
ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtgca atggcacaat cgtcatgccc tgaacacctt gactcccggg 700
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
accatgtgtc ccagctagat tttaaatatt ttgtggagat gggggctctg 800
ctacgttgcc caggctggtc ttgaactcct aggcctcaagc aatcctcctg 850
cctcagcctc tcaaagtgtc aggattatag gcatgagtca ccctgtcttg 900
ctctggctct gttcttaaca ttctgccaaa acaacacagc tgggttcctc 950
gtgcagagcc tgctctgttg ccttcatgtc actcttggtg gctccactgg 1000
gaacacagct ctacgcttt ccacacctga ggcagagtg gagggggccc 1050
agggtgtggc ttgtctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
accaccctga cttctcctta gcccggttga gcctcacttt ccacttgtag 1150
agtccttctt cgcgtggttg ccatgactgt gagataagtc gaggctgtga 1200
agggcccgcc acagactgac ctgcctcccc aacccttagg ctttgctaac 1250
cgggaaagga gctaacgggt acagaagaca gccaaaggtc accctcccg 1300
gtgatttgta tgggtgttcc aggtgtgggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa ctctcttccct ggctgggtttt ccagaactac 1400
 agaggaatgg accacagtct tccagggtcc ctctctgtcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggcctttt taaacaaacc 1500
 cagctccagc cctgggtaac atggtaaagc cccgtctcta caaaaaaacc 1550
 caagttagcc gggcatggtg gtgcgcacct gtagtccacg ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtgcagg ctgcagtggg ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
 1 5 10 15
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatccca ggagcgcagt 50

ggccactatg gggctctgggc tgccccctgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggc cggggtatga ctttgcaact gaagctgaag 150
gagtcctttc tgacaaatc ctcctatgag tccagcttcc tggaaattgct 200
tgaaaagctc tgccctctcc tccatctccc ttcagggacc agcgtcacc 250
tccaccatgc aagatctcaa caccatgttg tctgcaaac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggccc ggatgcagga 350
ggcaggcccc gacctgtct ttcagcagc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
aattgtatct gtgtaatgtt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaga actctttaaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgtatt aatatttacc 200
attgcagaag cticattoag tgttgaaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttcccctccc ctccgattgt totaataaat tgaagatgt ctgctgtgga 350
aaaaggcatg tatttaaatc tgtatgatto tcaacctatc ttagtggga 400
aaggctcctg aaagccaatg gaaatacttt tttttttctt tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttgtt acgctagtaa 500
aatagaaacc tgtgtttatt ctacaggtatt ttagaaacaa cagccatcat 550
ttttttttat gtgtgtgttc ttggctgtat tcataaatta tatatttttg 600
gctatcaaat attacttcat tcaatataaa taacaatagt agaagttgtt 650
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750
gattacttga ttcaaataaa coaattatgt ttgtaattga tattaataaa 800
accagaataa aagttcatat ctaccc 826

<210> 365
<211> 67
<212> PRT
<213> Homo sapiens

<400> 365
Met Ile Gly Tyr Tyr Leu Ile Leu Phe Leu Met Trp Gly Ser Ser
1 5 10 15
Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
20 25 30
Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
35 40 45
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
50 55 60
Leu Pro Ser Asp Cys Ser Lys
65

<210> 366
<211> 2475
<212> DNA
<213> Homo sapiens

<400> 366
gaggatttgc cacagcagcg gatagagcag gagagcacca ccggagccct 50
tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100
ttttgcagga tgatggtggc ccttcgagga gcttctgcat tgctggttct 150
gttcctttgca gctttttctg ccccgccgca gtgtacccag gaccagcca 200
tggtgcatta catctaccag cgctttcgag tcttgagcag agggctggaa 250
aaatgtacc aagcaacgag ggcatacatt caagaattcc aagagtctct 300
aâaaaaata tctgtcatgc tgggaagatg tcagacotac acaagtgagt 350
acaagatgac agtgggtaac ttggcactga gagttgaac tgcccaacgg 400
gagattgact acatacaata ccttcgagag gctgacgagt gcatcgatc 450
agaggacaag acactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatcgc	gactctgctg	aatgcaagct	tgtacaacat	gotgatgggc	550
ataaagtctt	tgaaaatagt	gaagaagatg	atggacacac	atggctcttg	600
gatgaaagat	gctgtctata	actctccaaa	ggtgtactta	ttaattggat	650
ccagaaacaa	cactgttttg	gaatttgcaa	acatacgggc	attcatggag	700
gataacacca	agccagctcc	ccggaagcaa	atcctaacac	tttcttgcca	750
gggaacaggc	caagtgatct	acaaaggttt	tctatttttt	cataaccaag	800
caactcttaa	tgagataatc	aaatataacc	tcagaagag	gactgtggaa	850
gatcgaatgc	tgctcccagg	aggggtaggc	cgagcattgg	tttaccagca	900
ctccccctca	acttacattg	acctggctgt	ggatgagcat	gggctctggg	950
ccatccactc	tggggccaggc	acccatagcc	atttggttct	cacaagatt	1000
gagccgggca	cactggggagt	ggagcatcca	tgggataccc	catgcagaag	1050
ccaggatgct	gaagcctcat	tctctttgtg	tggggttctc	tatgtggtct	1100
acagtactgg	gggccagggc	cctcatcgca	tcacctgcat	ctatgatcca	1150
ctgggcacta	tcagttagga	ggacttgccc	aacttgttct	tccccaaag	1200
accaagaagt	cactccatga	tccattacaa	ccccagagat	aagcagctct	1250
atgcctggaa	tgaaggaaac	cagatcattt	acaaactcca	gacaaagaga	1300
aagctgcctc	tgaagtaatg	cattacagct	gtgagaaaga	gcactgtggc	1350
tttggcagct	gtctacagg	acagttaggc	tatagccctt	tcacaatata	1400
gtatccctct	aatcacacac	aggaagagtg	tgtagaagtg	gaaatacgta	1450
tgctctcttt	cccaaatgtc	actgccttag	gtatcttcca	agagcttaga	1500
tgagagcata	tcatcaggaa	agtttcaaca	atgtccatta	ctcccccaaa	1550
cctctctggc	ctcaaggatg	accacattct	gatacagcct	acttcaagcc	1600
ttttgtttta	ctgctcccca	gcatttactg	taactctgcc	atcttccctc	1650
ccacaatttag	agttgtatgc	cagccoctaa	tattcaccac	tggcttttct	1700
ctccccctgc	ctttgtctgaa	gtctctccct	ctttttcaaa	tgtctattga	1750
tattctccca	ttttcactgc	ccaactaaaa	ctattattaat	atttctttct	1800
tttcttttct	tttttttgag	acaaggcttc	actatgttgc	ccaggctggt	1850
ctcaaaactcc	agagctcaag	agatctctct	gcctcagcct	cctaagtacc	1900
tgggattaca	ggcatgtgcc	accacacctg	gcttaaaata	ctatttctta	1950
ttgaggttta	acctctattt	cccctagccc	tgtccttcca	ctaagcttgg	2000
tagatgtaat	aataaagtga	aatattaac	atttgaatat	cgctttccag	2050
gtgtgaagtq	tttgacatc	attgaattct	cgtttcacct	ttgtgaaaca	2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaaagtga aagatacagc tagaaaatac tacaaatccc atagtttttc 2200
 cattgcccaa ggaagcatca aatacgtatg tttgttoacc tactottata 2250
 gtcaatgcgt tcacgtttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta agggtagga ccccaactct agcctoctct 2400
 tgtcttgctg tcctctgttt ctctctttct gctttaaatt caataaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu
 215 220 225
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn
 230 235 240
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly
 245 250 255
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile
 260 265 270
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly
 275 280 285
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly
 290 295 300
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln
 305 310 315
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val
 320 325 330
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr
 335 340 345
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe
 350 355 360
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro
 365 370 375
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile
 380 385 390
 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys
 395 400

<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

gggcgcccg gtactcacta gctgaggtgg cagtgggtcc accaacatgg 50
 agctctcgca gatgtcggag ctcatggggc tgtcgggtgt gcttggggtg 100
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc cgcctgccca aaaagcaaat ggatttcac 200
 ctgacaaaac ttctgggatcc aagaagcaga aacaatatca gcggattcgg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggctgcagc 300
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaatacct ggctacctgt gcagatgac gcaccatccg catctggagc 400
 accaaggact tctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag ccctgactgc agagccttca 500
 tcgtctggct ggccaacggg gacacccctcc gtgtcttcaa gatgaccaag 550
 cgggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600
 aaagcacaag gcgcctgtca tcgacattgg cattgtctaac acagggaagt 650
 ttatcatgac tgcctccagt gacaccactg tcctcatctg gagcctgaag 700
 ggtcaagtgc tgtctacat caacaccaac cagatgaaca acacacacgc 750
 tgctgtatct cctctgtggca gatttgtagc ctcgtgtggc ttcaccccag 800
 atgtgaaggt ttgggaagtc tgccttggaa agaaggggga gttccaggag 850
 gtggtgcgag ccttcgaact aaagggccac tccgcggctg tgcactcgtt 900
 tgctttctcc aacgactcac ggaggatggc tctgtctcc aaggatggta 950
 catgaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
 tacttctgta agacaggccg ctttgaagag gcgcggggtg ccgcgccgtg 1050
 ccgcctggcc ctctccccc acgcccaggt cttggccttg gccagtggca 1100
 gtatgtatca tctctacaat acccgcgggg gcgagaagga ggagtgtctt 1150
 gagcgggtcc atggcgagtg tatcgccaac ttgtccttg acatcactgg 1200
 ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttoacaaca 1250
 ctctggcca ccgagccatg gtggaggaga tgcaggcca cctgaagcgg 1300
 gcctccaacg agagcaccg ccagaggctg cagcagcagc tgaccaggc 1350
 ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400
 gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450
 ctgccatctt tcctccagg tggaaacct tcagaaggag tctcctggtt 1500
 ttcttactgg tggcctgct tcttccatt gaaactactt ttgtctactt 1550
 aggtctctct cttcttgctg gctgtgactc ctccctgact agtggccaag 1600
 gtgctttctt tcctccagg ccagtggggt ggaatctgtc cccacctggc 1650
 actgaggaga atggtagaga ggaggaggaga gagagagaga atgtgatttt 1700
 tggccttggt gcagcacatc ctcacaccca aagaagtttg taaatgttcc 1750
 agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
 ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
 ctaagggatt tccttctggg cctcagttct atttgaaga tggagaataa 1900
 tcctctctgt gaactccttg caaagatgat atgaggctaa gagaatatca 1950
 agtcccaggc tctggaagaa aagtagaaaa gagtagtact attgtccaat 2000
 gtcatgaaag tggtaaaagt gggaaccagt gtgctttgaa accaaattag 2050

aaacacattc ctgggaag caaagttttc tgggacttga tcatacattt 2100
 tatatggttg ggacttctct cttegggaga tgatatcttg ttaaggaga 2150
 cctcttttca gttcatcaag ttcacagat atttgagtgc ccactctgtg 2200
 cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369
 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 369
 Met Glu Leu Ser Gln Met Ser Glu Leu Met Gly Leu Ser Val Leu
 1 5 10 15
 Leu Gly Leu Leu Ala Leu Met Ala Thr Ala Ala Val Ala Arg Gly
 20 25 30
 Trp Leu Arg Ala Gly Glu Glu Arg Ser Gly Arg Pro Ala Cys Gln
 35 40 45
 Lys Ala Asn Gly Phe Pro Pro Asp Lys Ser Ser Gly Ser Lys Lys
 50 55 60
 Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His
 65 70 75
 Asn Phe Thr His Arg Leu Leu Ala Ala Ala Leu Lys Ser His Ser
 80 85 90
 Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu
 95 100 105
 Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys
 110 115 120
 Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu
 125 130 135
 Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala
 140 145 150
 Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys
 155 160 165
 Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro
 170 175 180
 Glu Asp Phe Pro Lys Lys His Lys Ala Pro Val Ile Asp Ile Gly
 185 190 195
 Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr
 200 205 210
 Thr Val Leu Ile Trp Ser Leu Lys Gly Gln Val Leu Ser Thr Ile
 215 220 225
 Asn Thr Asn Gln Met Asn Asn Thr His Ala Ala Val Ser Pro Cys
 230 235 240

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val
				245					250					255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val
				260					265					270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe
				275					280					285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp
				290					295					300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys
				305					310					315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala
				320					325					330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val
				335					340					345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg
				350					355					360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys
				365					370					375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser
				380					385					390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His
				395					400					405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser
				410					415					420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala
				425					430					435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys			
				440					445					

```
<210> 370
<211> 1415
<212> DNA
<213> Homo sapiens
```

```
<400> 370
tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
catctaagca ggcagtgttt tgcttcacc ccaagtgcac atgagagggtg 100
ccacgcgagt ctcaatcatg ctctctctag taactgtgtc tgactgtgct 150
gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
ctgtgccatc agcctgtggc ttgaggggct gcggatgtgc accccgctgg 250
ggcgggaagg cgaggagtgc caccocggca gccacaaggt cccctctctc 300
aggaaacgca agcaccacac ctgtctctgc ttgcccaacc tgctgtgctc 350
caggttcccg gacgcgaagt accgtgtctc catggacttg aagaacatca 400
```

atttttaggc gcttgctggtg tctcaggata cccaccatcc ttttctgag 450
 cacagcctgg atttttattt ctgccatgaa acccagctcc catgactctc 500
 ccagtcctta cactgactac cctgatctct ctgtcttagt acgcacatat 550
 gcacacaggg agacatacct cccatcatga catgggtccc aggctggcct 600
 gaggatgtca cagcttgagg ctgtggtgtg aaaggtggcc agcctgggtc 650
 ttttccctgc tcaggctgcc agagagggtg taaatggcag aaaggacatt 700
 cccctcccc tccccagggtg aactgctctc tttctggggc cctgcccctc 750
 tccccacatg tatccctcgg ttgaattag acattctcgg gcacaggctc 800
 ttgggtgcct tgctcagagt cccagggtct ggccctgacc tcaggccctt 850
 cacgtgaggt ctgtgaggac caatttgtgg gtatgttcac ttccctcgat 900
 tggttaaact cttagtttca gaccacagac tcaagattgg ctcttcccag 950
 agggcagcag acagtcaccc caaggcaggt gtaggggacc caggagggcc 1000
 aatcagcccc ctgaagactc tgggtccagt cagcctgtgg cttgtggcct 1050
 gtgacctgtg acctctctgc agaattgtca tgcctctgag gccccctctt 1100
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
 cattaaaatg caaatgggtg tgggttcaatc taatctgata ttgacatat 1200
 agaaggcaat taggggtgtt ccttaaacia ctcctttcca aggatcagcc 1250
 ctgagagcag gttggtgact ttgaggaggg cagtcctctg tcagattgg 1300
 ggtggggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
 tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaag 1400
 caccaactga aaaaa 1415

<210> 371
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 371
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr
 1 5 10 15
 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
 20 25 30
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro
80 85

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

agcgccggcg cgtcggggcg gtaaaaggcc ggcaagaagg aggcacttga 50
gaaatgtctt tctccagga cccaagtctt ttcaccatgg ggaatgggtc 100
cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
acacagacgt gtttctgtcc aagccccaga aagcgccctt ggagtacctg 200
gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
aaagagagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
caggctgttt cctctgtcga gaggaagctg cgatctgtgc ctccctgaaa 350
agcatgttgg accagctggg cgtcccccct tatgcagtgg taaaggagca 400
catcaggact gaagtgaag atttccagcc ttatttcaaa ggagaaatct 450
tcctggatga aaagaaaaag ttctatggtc cacaaggcgg gaagatgatg 500
tttatgggat ttatccgtct gggagtgtgg tacaacttct tccgagcctg 550
gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
gagttttcgt ggtgggatca gaaaagcagg gcattcttct tgagcaccga 650
gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaaagctg 700
taagatgata aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
aaactgccca gtcagggat aaccagggac attcacctgt gttcatggga 800
tgtattgttt ccaactgtgt ccctaaggag tgagaaaccc atttatactc 850
tactctcagt atggattatt aatgtatctt aatattctgt ttagggccac 900
taaggcaaaa tagcccaaaa acaagactga caaaaatctg aaaaactaat 950
gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050
aaggtagaca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100
atggcgcaac ccgctctcta ctaaaaatac aaaaatcacc cgggtgtggt 1150
ggcaggcacc tgtagtccca gctacccggg aggctgaggc aggagaatca 1200
cttgaacctg ggaggtggag gttgcggtga gctgagatca caccactgta 1250
ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373

Met	Ser	Phe	Leu	Gln	Asp	Pro	Ser	Phe	Phe	Thr	Met	Gly	Met	Trp	
1				5						10				15	
Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu	
				20					25					30	
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala	
				35					40					45	
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu	
				50					55					60	
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala	
				65					70					75	
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu	
				80					85					90	
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu	
				95					100					105	
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu	
				110					115					120	
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp	
				125					130					135	
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe	
				140					145					150	
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala	
				155					160					165	
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile	
				170					175					180	
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu	
				185					190					195	
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu	
				200					205					210	
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala	
				215					220					225	

Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374

acggaccgag ggttcgaggg agggacacgg accaggaacc tgagctaggt 50
 caaagacgcc cgggccaggt gccccgtcgc aggtgccccc ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttctctggcg ctgccaaccc 150
gccaccacgc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggcgc agcctggggg caaatacaga 250
ccacttctgc aatgagaat agcactgttt tgccttcac caccagctcc 300
agctccgatg gcaacctgcg tccggaagcc atcaactgcta tcatcggtgt 350
cttctccctc ttggctgcct tgctcctggc tgtggggctg gcaactgttg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500
caaggagacg gtgcagggtt gcctgcccat ctaggteccc tctcctgcac 550
ctgtctccct tcattgctgt gtgaccttgg ggaaggcag tgccctctct 600
gggcagtcag atccaccacg tgcttaatat cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtca agagaggatg gggctattca ctttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375
<211> 123
<212> PRT
<213> Homo sapiens

<400> 375
Met Ala Asn Pro Gly Leu Gly Leu Leu Leu Ala Leu Gly Leu Pro
1 5 10 15
Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr
20 25 30
Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser
35 40 45
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile
50 55 60
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Ala Val Gly
65 70 75
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu
80 85 90
Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala
95 100 105
Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys
110 115 120
Leu Pro Ile

<210> 376
<211> 713
<212> DNA
<213> Homo sapiens

<400> 376
aatatatcat ctattttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
ttctgtgcac tattattatt gttggtagt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaattggcta cttctatca agaaataaag 200
agaaccacag tcaaccaca caatcatctt tagaagacag tgtgactcct 250
accaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga gggtaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataagggtgaa 450
attataagta cccatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgattttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttccc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
 tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150
 ccagaagatg aaaaaataat tgaacaaata gaggatattg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagtgt caccacctac 350
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
 agaaaggcga atacattcac ttcaccctgt accttctact tggaaaaaaa 450
 caaaatgaat atggaccacc aggcaaaactg tttgtccatg agtggggtca 500
 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550
 gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600
 ggtagaataa gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgcaattct 700
 ttctgataa agtacaaaca gaaaagcat ccataatgtt tatgcaaagt 750
 attgattctg ttgttgaaatt ttgtaacgaa aaaaccata atcaagaagc 800
 tccaagccta caaaacataa agtgcaattt tagaagtaca tgggagggtga 850
 ttagcaattc tgaggatttt aaaaacacca tacccatgtg gacaccacct 900
 cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950
 agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatcgaa 1000
 tgaatcaagc agcaaaacat ttctgtctgc agactgttga aaatggatcc 1050
 tgggtgggga tggttcactt tgatagtact gccactattg taaataagct 1100
 aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
 ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200
 ttccagtgta ttggagagct acattcccaa ctcgatggat ccgaagtact 1250
 gctgctgact gatggggagg ataacaactgc aagttcttgt attgatgaag 1300
 tgaacaacaa tggggccatt gttcatttta ttgctttggg aagagctgct 1350
 gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
 tgtttcagat gaagctcaga acaatggcct cattgatgct ttgggggtc 1450
 ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaaag 1500
 aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550
 tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaaacagtc 1600
 tgcctcccag tatttctctc tgggatccca gtggaacaaat attggaanaa 1650

ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700
 tgcaaaagtg ggcacttggg catacaatct tcaagccaaa gcgaaccagg 1750
 aaacattaac tattacagta acttctcgag cagcaaatcc ttctgtgcct 1800
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttcccagg 1850
 cccaatgatt gtttacgcag aaattctaca aggatattga cctgttcttg 1900
 gagccaatgt gactgcttcc attgaatcac agaattggaca tacagaagtt 1950
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaattgatg 2000
 agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050
 taaaagttcg ggctcatgga ggagcaaaaca ctgccaggct aaaattacgg 2100
 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
 aattgaagca aaccgcgcaa gacctgaat tgatgaggat actcagacca 2200
 ccttgaggga ttacagcga acagcatccg gaggtgcatt tgtggtatca 2250
 caagtcccaa gccttccctt gctgaccaa taccaccaa gtcaaatcac 2300
 agacctgat gccacagttc atgaggataa gattattctt acatggacag 2350
 caccaggaga taattttgat gtggaaaaag ttcaacgta tatcataaga 2400
 ataagtgoaa gtattcttga tctaagagac agttttgatg atgctcttca 2450
 agtaaaact actgatctgt caccaaagga ggccaaactc aaggaaagct 2500
 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatattt 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaatcct gatgacattg 2650
 atccctacac tactcctact cctactccta ctctgataa aagtcataat 2700
 tctggagtta atatttttac gctggatttg tctgtgattg ggtctgttgt 2750
 aattgttaac ttatttttaa gtaccacctt ttgaacctta acgaagaaaa 2800
 aaactctcaa gtagacctag aagagagttt taaaaaaaca aacaatgtaa 2850
 gtaaaagata ttcttgaatc ttaaaattca tccatgtgt gatcataaac 2900
 tcataaaaaa aattttaaga tgtcgaaaaa ggatactttg attaaataaa 2950
 aacactcatg gatattgtaa aactgtcaag attaaaattt aatgatttca 3000
 tttatttgtt attttatttg taagaaatag tgatgaacaa agatcccttt 3050
 tcatactgat acctggttgt atattatttg atgcaacagt ttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcactctatct gagtagtcaa 3150
 aatacaagta aaggagagca aataaacaac atttggaaaa aaaaaaaaaa 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu	
1				5					10					15	
Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly	
				20					25					30	
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp	
				35					40					45	
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser	
				50					55					60	
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn	
				65					70					75	
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr	
				80					85					90	
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	
				95					100					105	
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	
				110					115					120	
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	
				125					130					135	
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	
				140					145					150	
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	
				155					160					165	
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	
				170					175					180	
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	
				185					190					195	
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	
				200					205					210	
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	
				215					220					225	
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	
				230					235					240	
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	
				245					250					255	
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg	
				260					265					270	
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr	

					590					595					600
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala	605
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr	610
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu	615
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val	620
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser	625
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys	630
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val	635
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp	640
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser	645
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro	650
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val	655
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn	660
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala	665
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val	670
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser	675
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His	680
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser	685
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala	690
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro	695
Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu	700
Val	Leu	Ser	Val	Ile	Gly	Ser	Val	Val	Ile	Val	Asn	Phe	Ile	Leu	705

Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

ctccttaggt ggaaccctg ggagtagagt actgacagca aagaccggga 50
 aagaccatac gtccccgggc aggggtgaca acaggtgtca tctttttgat 100
 ctctgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatatt 150
 gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
 cccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
 gtcctctcg cttacttgt ggttgaggga gagaacctt gtggggctgc 300
 gttctcttag cagtgtcag aagtgacttg cctgagggg gaccagaaga 350
 aaggaaagt cccctcttgc tgttggtctgc acatcaggaa ggctgtgatg 400
 ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgcct 450
 gcaagatcat cttttaaag tagagaagct gctctgtgtg gtggttaact 500
 ccaagaggca gaactcgttc tagaaggaat tggatgcaag cagctccggg 550
 ggccccaac gcatgcttcc tgtggtctag ccagggaag cccttccgtg 600
 ggggccccg ctttgaggga tgccaccggt tctggacgca tggtgatgc 650
 ctgaatgatg atggttcgcc gggggctgct tgcgtggatt tcccggttg 700
 tggttttgt ggtgctctc tgetgtgcta tctctgtcct gtacatgttg 750
 gcctgcacc caaaaggtga cgaggagcag ctggcactgc ccaggggcaa 800
 cagcccccag gggaaggagg ggtaccaggc cgtccttcag gagtgggagg 850
 agcagcacc caactacgtg agcagcctga agcggcagat cgcacagctc 900
 aaggaggagc tgcaggagag gagtgcagc ctcagggaat ggcagtacca 950
 agccagcat gctgctggcc tgggtctgga caggagcccc ccagagaaaa 1000
 ccaggccga cctctgggcc ttctgcact cgcaggtgga caaggcagag 1050
 gtgaatgctg gcgtcaagct ggcacagag tatgcagag tgcctttcga 1100
 tagctttact ctacagaag tgtaccagct ggagactgac cttaaccgcc 1150
 accccaggga gaagcctgtg aggaaggaca agcgggatga gttggtgaa 1200
 gccattgaat cagccttgga gaccctgaac aatcctgcag agaacagccc 1250
 caatcacctg ccttacacg cctctgatt catagaagg atctaccgaa 1300

cagaaaggga caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350
 aaacacgaat tcaaacggct catcttattt cgaccattca gcccacatcat 1400
 gaaagtga aaatgaaaagc tcaacatggc caacacgctt atcaatgtta 1450
 tcgtgcctct agcaaaaagg gtggacaagt tccggcagtt catgcagaat 1500
 ttocagggaga tgtgcattga gcaggatggg agagtcacatc tcaactgtgt 1550
 ttactttggg aaagaagaaa taaatgaagt caaaggaata cttgaaaaca 1600
 cttccaaagc tgccaaactt aggaacttta cttcatcca gctgaatgga 1650
 gaattttctc ggggaaaggg acttgatgtt ggagcccgct tctggaagg 1700
 aagcaacgct cttctctttt tctgtgatgt ggacatctac ttcacatctg 1750
 aattctctca tacgtgtagg ctgaatacac agccagggaa gaaggtattt 1800
 tatccagttc ttttcagtca gtacaatcct ggcataatat acggccacca 1850
 tgatgcagtc cctcccttgg aacagcagct ggtcataaag aaggaaaactg 1900
 gattttggag agactttgga tttgggatga cgtgtcagta tcggtcagac 1950
 ttcatacata taggtgggtt tgatctggac atcaaaaggc gggcgaggaga 2000
 ggatgtgcac ctttatcgca agtatctcca cagcaacctc atagtggtag 2050
 ggacgcctgt gcgaggactc ttccacctct ggcatgagaa gcgctgcagt 2100
 gaacgagctga ccccgagca gtacaagatg tgcatgcagt ccaagccat 2150
 gaacgaggca tcccacggcc agctgggcat gctggtgttc aggcacgaga 2200
 tagaggctca ctttcgcaa cagaaacaga agacaagtag caaaaaaaca 2250
 tgaactocca gagaaggatt gtgggagaca ctttttcttt ctttttgcaa 2300
 ttactgaaag tggctgcaac agagaaaaga cttccataaa ggaacgaaaa 2350
 agaattggac tgatgggtca gagatgagaa agcctccgat ttctctctgt 2400
 tgggcttttt acaacagaaa tcaaatctct cgctttgctt gcaaaagtaa 2450
 ccagtgatga ccctgtgaag tgtctgacaa aggcagaatg cttgtgagat 2500
 tataagccta atggtgtgga ggttttgatg gtgtttacaa tacactgaga 2550
 octgttgttt tgtgtgctca ttgaaatatt catgatttaa gagcagtttt 2600
 gtaaaaaatt cattagcatg aaaggcaagc atattttctc tcatatgaat 2650
 gagcctatca gcagggtctt agtttctagg aatgctaaaa tatcagaagg 2700
 caggagagga gataggctta ttatgatact agtgagtaca ttaagtaaaa 2750
 taaatggac cagaaaaaaa aagaaccoat aaatatcgtg tcatattttc 2800
 cccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850
 ctgtctccgt ttttttcttt tatttaaaaa tgcacttttt ttccctgtgt 2900

agttatagtc tgcttatttta attaccactt tgcaagcctt acaagagagc 2950
 acaagttggc ctacattttt atatttttta agaagatact ttgagatgca 3000
 ttatgagaac ttccagtcca aagcatcaaa ttgatgccat atccaaggac 3050
 atgccaaatg ctgattctgt caggcactga atgtcaggca ttgagacata 3100
 ggggaaggat ggtttgtact aatacagacg tacagatact ttctctgaag 3150
 agtattttgc aagaggagca actgaacact ggaggaaaag aaaatgacac 3200
 tttctgcttt acagaaaagg aaactcatc agactggtga tatcgtgatg 3250
 tacctaaaag tcagaaaacca cattttctcc tcagaagtag ggaccgcttt 3300
 cttacctgtt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350
 tttcaaaaca ggggtgctct cctggcttct ggcttccata agaagaaatg 3400
 gagaaaaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450
 ccagaatcta gtgggatgga agtttttgct acatgttatc caccgccaggc 3500
 cagggtggaag taactgaatt attttttaaa ttaagcagtt ctactcaatc 3550
 accaagatgc ttctgaaaat tgcattttat taccattttc aactattttt 3600
 taaaaataaa tacagttaac atagagtggg ttcttcattc atgtgaaaaa 3650
 tattagccag caccagatgc atgagctaata tatctctttg agtccttgct 3700
 tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750
 gctgttggtg tggtaaaaaa tgcattgtat tgattgttac tggtagttta 3800
 tgaaatttaa ttaaaacaca ggccatgaat ggaaggtggg attgcacagc 3850
 taataaaata tgatttgtg atatgaa 3877

<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

Met	Met	Met	Val	Arg	Arg	Gly	Leu	Leu	Ala	Trp	Ile	Ser	Arg	Val
1					5				10					15
Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
				20					25					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
				35					40					45
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50					55					60
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
				65					70					75
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80					85					90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	
				275					280					285	
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	
				290					295					300	
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	
				305					310					315	
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	
				320					325					330	
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	
				335					340					345	
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	
				350					355					360	
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
				365					370					375	
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	
				380					385					390	
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	
				395					400					405	

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	
				410					415					420	
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
				425					430					435	
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
				440					445					450	
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
				455					460					465	
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
				470					475					480	
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
				515					520					525	
Lys	Thr	Ser	Ser	Lys	Lys	Thr									
				530											

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaagggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtagc aatcctggca taatatacgg ccaccatgat gcagtcac 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcca ttcatgtga 50
actctgtcaa ccaggtgcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaag cgatggtagc tttctccatg agaaaagtgc ccaacagaga 200
agcaacagaa atttcccatg tctacttttg caatgtaacc cagaggggat 250
cattctgggt tgtgggttaca gaccttcaa aaaatcacac cttctctgct 300
gttgaggtgc aatcagccat aagaatgaac aagaacogga tcaacaatgc 350
cttctttcta aatgaccaa ctctggaatt tttaaaaac cttccacac 400
ttgaccacc catggaccca tctgtgcca tctggattat tatatttggt 450
gtgatatatt gcatcatcat agttgcaatt gcactactga tttatcagg 500
gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaac atgatcaca ttgaaaatgg catccctctc 600
gatccctcgg acatgaaggg gggcatatta atgatgcctt catgacagag 650
gatgagaggg tcacccctct ctgaagggtt gttgttctgc ttcctcaaga 700
aattaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800
tgtgttgtaa agtgaaaagc aatcaattat accaccaaac accactgaaa 850
tcataagcta ttacgactc aaaaattctt aaaatatatt tctgacagta 900
tagtgtataa atgtggtcat gtggtatttg tagttattga ttaagcatt 950
tttagaataa agatcaggca tatgtatata tttcacact tcaagacct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatag 1100
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300
 agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 387
 Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu
 1 5 10 15
 Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser
 20 25 30
 Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn
 35 40 45
 Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
 50 55 60
 Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
 65 70 75
 Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
 80 85 90
 Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
 95 100 105
 Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
 110 115 120
 Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
 125 130 135
 Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
 140 145 150
 Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
 155 160 165
 Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
 170 175 180
 Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
 185 190 195
 Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
 200 205 210
 Pro Ser

<210> 388
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 388
 aactcaaaact cctctctctg ggaacacgcg gtgcttgctc ctcccgagat 50

```

ggcgcttgga ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100
gccaaggctg ggtttccctc atgtatggca agagctctac tcgtgcggtg 150
cttctctctc ttggcataca gtcacacgct ctttggccta tagcagctgt 200
ggaatttat acctcccggt tgcgtggagg tgtaaatggg acagatgctc 250
ggttaaaatg cactttctcc agcttctgcc ctgtgggtga tgctctaaca 300
gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350
ctactaccac atagatccct tccaacctat gagtgggcgg tttaaggacc 400
gggtgtcttg ggatgggaat cctgagcggg acgatgcctc catccttctc 450
tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
acactgtacg ctctctctgag atccacttcc tggctctggc cattggctct 600
gctctgtcac tgatgatcat aatagtaatt gtagtgttcc tcttccagca 650
ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800
gaacaagaac cctagtattt ctggaagtta atggaaacct tctcttggtc 850
tttccagttg tgaccgggtt tccaacctag tctgcagcat attagattct 900
agacaagcaa caccctctg gagccagcac agtgcctctc catatcaca 950
gtcatacaca gcctcattat taaggctcta tttaatttca gagtgtaaat 1000
tttttcaagt gtcattagtg tttataaac aagaagctac atttttgccc 1050
ttaagacaat acctacagtg ttatgacttg tatcacata tattggtatc 1100
aaaggggata aaagcoaatt tgtctgttac atttcccttc acgtatttct 1150
tttagcagca cttctgctac taaagttaat gtgtttactc tctttccttc 1200
ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
acagttaact ctaaatccaa actgtttaat gacattttta ttttatgtc 1300
tctccttaac tatgagacac atctgttttt actgaatttc tttcaatat 1350
ccaggtgata gatttttgtc g 1371

```

```
<210> 389
<211> 215
<212> PRT
<213> Homo sapiens
```

```
<400> 389
Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly
  1           5           10          15
```

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctaggagcca gagg 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagg 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggaccttttg gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttcct 50
 agcagtcctg gtactcttgg gagtttccat cttctcggtc tctgcccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctcctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccactgcgac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tctgtgatt tcatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatcagt ttattttcct tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10 15
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Thr Thr Thr Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gtccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
caggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gccccaagg aagtgggtcc 50
aaccttgac ccctaggggt ctggatttgc tggttaacaa gataacctga 100
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
ggccagtgcca ggggtggggg cggcaaaact cataaagaac cagagggtct 400
gggccccggc cacagagtca tctgccagc tcctctgctg ctggccagtg 450
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
gcctcggggc catggtcctt gtctagggca gcaattctca acctctttgc 550
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaaa actgagaaat gggccgggca cgggtggctca gcgctgtaat 650

cccagcactt tgggagccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgactagg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacagg aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
 gtcattgccg tgctgtctct gtgcctgtct tgggccctgg caatggtgac 50
 ccggcctgcc tcagcggccc ccatgggcgg ccagaaactg gcacagcatg 100
 aggagctgac cctgtctctc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccagggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgagccacag gaacttcggg caagcctgtt ggagactcag 300
 atgaggaggg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggt gccaggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta cggagaattt 450
 gaggtcttaa aggtcacgc tgacaagcag agccacatcc tatgggcct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct ccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgcgtcaagg aacacttcca 650
 cgccccgtga ggccccctgt caggaggagg ctgcctgttc actgggatca 700
 gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagcccat tggggagggg tggaggaagg 800
 acatgtacc ttctatgcct acacaccct cattaaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402

<211> 1915

<212> DNA

<213> Homo sapiens

<400> 402

ggcaacatgg ctcagcaggc ttgcccaga gccatggcaa agaattggact 50
 tgtaatttgc atcctgggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaactctg agtgagagac 150
 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtcaa 200
 tgccttgaa gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggt caccggaaggc 450
 aagtttgttg acgtcaacgg aatcgctatc tccttctcca actgggaccg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggto tttctccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc ttggggattt 800
 tgcccttctc ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtcttct 900
 tcaactgtac aaaccaggtt tgttttcaaa aaatcacagt agcaatgcaa 950
 ctcatcactc tagaaaagca agcttaggct acctgaaaa ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgctata taatccaaaa acttttcagc ctgttgctca ttctgtccca 1100
 tgctggcaat aataccttgt cagcccatta ccttatttt gaattgtctc 1150
 atctcctggt gggacttgta tottgctctgc catatcagaa cacaaccccc 1200
 tgaagagggt ctgatttgat tttttttttt tottcatgcc tacccttttt 1250
 ttggaagtgt ccagccgcaa ttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350
accctaaggc atatcaaaga agcagattgc atgataaaacg gaaatagaaa 1400
aaaagaacct acattttattt tgccttagca tccttactct caccttttat 1450
gagattgaga gtggacttac atttcctttt ttacattttc gtatatattat 1500
tttttttagc catcattata tggtttaagtc tattatgggc aaccaatctt 1550
tggaagctga aaactgaatt taaagaatgc tatcttgga aattgcatatc 1600
gtctgtgcaa ttttttattc tgcctagtgc tattctgctt gtttaactag 1650
attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttggt 1750
cttcaaataa atagtgttta aacattgaat gtgttttggtg aacaatatcc 1800
cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
tcattgtcta ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
aaaaaaaaa aaaaa 1915

<210> 403
<211> 206
<212> PRT
<213> Homo sapiens

<400> 403
Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
1 5 10 15
Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
20 25 30
Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
35 40 45
Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
50 55 60
Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
65 70 75
Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
80 85 90
Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
95 100 105
Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
110 115 120
Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
125 130 135
Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
140 145 150
Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

155	160	165
Ala Gln Pro Asn Gly Lys Arg Glu Asn Cys Val Leu Phe Ser		
170	175	180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser		
185	190	195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys		
200	205	

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctggttatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gctcgtggc cttgccggg cagccgcagg 50
 ttccccgcgc gccccgagcc ccgcgcacat gaagctgcgc gccctcctgg 100
 ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gctgtgctgc gcgctggagt cggcgccgga 200
 ggccggggcc gggaccctgg ccaacccctc cggcacccct aacctcctga 250
 agctctctgt gaggagcctg ggcacccccc tgaaccacct catagagggc 300
 tcccagaagt gtgtgggtga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccaccgc cgagggtga 450
 aaaccccgcc gcggggagga cgttccatcc ctttccccgc gcccctctca 500
 ataacctggt ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
 1 5 10 15
 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

<400> 409
 tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50
 aaggagggca ctccttggcc tccgcagccg atcacatgaa ggtgggtgcca 100
 agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggcgtt 150
 ggcccccagt cctcagtcgc cagagacccc agcccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggcgggtga ggaagagaaa gcctggctga tggccagcag 300
 gcagcagcgt gccaaaggaga cttcaaaact cggtattcagc ctgctgcgaa 350
 agatctccat gaggcacgat ggcaacatgg ttttctctcc atttgcatg 400
 tccttggcca tgacaggcgt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtctc acttgcaggc cctgaagccc accaagcccg 500

ggctcctgcc ttccctcttt aagggactca gagagaccct ctcccgaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcaccc acaaggattt 600
 tgatgtcaaa gagactttct tcaatttato caagaggat tttgatacag 650
 agtgcggtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800
 aagggaaatg gttgaccca tttgacctg tcttcacga agtcgacact 850
 ttccacctgg acaagtacaa gaccattaag gtgcccata gtacggtgc 900
 aggcaagttt gctccacct ttgacaagaa ttttcgtgt catgtcctca 950
 aactgccta ccaaggaaat gccaccatgc tgggtgtct catggagaaa 1000
 atgggtgacc acctcgccct tgaagactac ctgaccacag acttggttga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagt tctttccga 1100
 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150
 ggaatcagaa gaattcttc accctttgct gaccttagt aactctcagc 1200
 tactggaaga aatctccaag tatccagggt tttacgaaga acagtgttg 1250
 aagttgatga aaggggact gaggcagtg caggaatct gtcagaaatt 1300
 actgcttatt ccatgcctcc tgtcatcaaa gtggaccgac catttcattt 1350
 catgatctat gaagaaacct ctggaatgct tctgtttctg gcagggttg 1400
 tgaatccgac tctcctataa ttcaggacat gcataagcac ttcgtgctgt 1450
 agtagatgct gaatctgagg tatcaaacac acacaggata ccagcaattg 1500
 atggcagggg agagtgttcc ttttgttct aactagtta ggggtgttct 1550
 aaataaatac agtagtccc acttatctga ggggataca ttcaaagacc 1600
 cccagcagat gcctgaaacg gtggacagt ctgaacctta tatatattt 1650
 ttctacaca tacataccta tgataaagt taattataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggcacagac aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaaatatt catttaatgt ttttggacca tggttgacca tggttaactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaa aaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln	
1				5					10					15	
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu	
				20					25					30	
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro	
				35					40					45	
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala	
				50					55					60	
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu	
				65					70					75	
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	
				80					85					90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	
				95					100					105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	
				110					115					120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	
				125					130					135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	
				140					145					150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	
				155					160					165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	
				170					175					180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	
				185					190					195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	
				200					205					210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Lys	Phe	Asp	Glu	Ile	Asn	
				215					220					225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	
				230					235					240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	
				245					250					255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	
				260					265					270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	
				275					280					285	

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
 ctgggagtcag ccaactgcagc tccttgagca ctctctacag agacgaggac 50
 ccagacatg aggaggtcc tcctgggtcac cagcctggtg gttgtgctgc 100
 tgtgggaggc aggtgcagtc ccagcaccga aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccga gagaaggcct gggggcccg 200
 tgtggtggag cctccggaga aggaagacca gctggtggtg ctgttcctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 agggggccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggccgt gtctgagtc ccgagccga coatgacacg ctgtaccacc 400
 ctccgctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggccagcgt gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15

Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30

Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45

Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60

Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75

Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90

Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105

Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120

Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135

Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

agaaagctgc actctgttga gctccagggc gcagtgagg gagggagtga 50

aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100

caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150

tggagtacag atgaggctaa tacttaacttc aaggâatgga cctgttcttc 200

gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250

gtgcatttga tggcctgtat tttctccgca ctgagaatgg tggtatctac 300

cagacctctt gtgacatgac ctctgggggt ggcggtctga cctgtgtggc 350

cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctcccctg 600
 ctgaggtacc gcacggacac tggcttctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700
 ggaactgacaa cggtcccggtg atccctgtgg tctatgattt tggcgacgcc 750
 cagaaaaacag catcttatta ctcaccctat ggccagcggg aattcaactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccacgcct 850
 tgtgtgctgg aatgagggtc accggatgta aactgagca tcaactgcatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
 ttctggtttt gattggagt gatatggaac tcatgttgt tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtgggaggg aaccacagacc tctctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaaaca 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 414
 Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
 1 5 10 15
 Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
 20 25 30
 Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
 35 40 45
 Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
 50 55 60
 Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
 65 70 75
 Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
 80 85 90
 Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly
 95 100 105
 Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr
 110 115 120
 Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	
140	145	150
His Val Pro Asn Lys Ser Pro Met Gln His Trp Arg Asn Ser Ser		
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly Phe Leu Gln Thr Leu Gly		
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys Tyr Pro Val Lys Tyr Gly		
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly Pro Val Ile Pro Val Val		
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr Ala Ser Tyr Tyr Ser Pro		
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly Phe Val Gln Phe Arg Val		
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala Leu Cys Ala Gly Met Arg		
245	250	255
Val Thr Gly Cys Asn Thr Glu His His Cys Ile Gly Gly Gly Gly		
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln Cys Gly Asp Phe Ser Gly		
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His Val Gly Tyr Ser Ser Ser		
290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu Leu Phe Tyr Arg		
305	310	

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50
 cggctggggag ccacagaggc tgccgcattc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tcttggggag gctgcagggtg 150
 ctacgcgtgc tggggggcgc coatgaaagc gcagccatgg cggcattctgc 200
 aaacatagag aattctgggc ttccacacaa etccagtgt aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccacatag aaacotacag cggcatctaa tacaacaaca ccagggatgg 400
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
 gttggtggta ttgtattaac gctgggagtt ttatctattc ttacattgg 650
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
 aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750
 attgatgctg ccctatcaat taattttggt ttattaatag tttaaaacaa 800
 tattctcttt ttgaaaatag tataaacagg ccatgcatat atgtacagt 850
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
 tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
 gttcatagta agacaacaa gtccatcttt ttttttttgg ctggggtggg 1000
 ggcattggct acatatgacc agtaattgaa agacgtcacc actgaaagac 1050
 agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
 tttgggtatc tttttagct cadataaaga acttcagtgc ttttcagagc 1150
 tggatataac ttaattacta atgccacaca gaaattatac aatcaaaacta 1200
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 416
 Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly
 1 5 10 15
 Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala
 20 25 30
 Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His
 35 40 45
 Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser
 50 55 60
 Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr
 65 70 75
 Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys
 80 85 90
 Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr
 95 100 105
 Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser
 110 115 120
 Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr Ile			
	140	145			150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe Asp			
	155	160			165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val Leu			
	170	175			180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg Gly			
	185	190			195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200	205			

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccggggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccca 50
 gcgcgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100
 gcgatggcga cctgtggggg aggccttctt cggttggtc cttgtctcag 150
 cctgtctgct ctggcgcttt cgtgtgtgct gctggcgag ctgtcagacg 200
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctg ccctccctat 250
 aaagaaaatt ctgggcctat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgttgttg agcccatgcc tgtcgggggg cctgatgtag 350
 aagcatactg tctacgtgtg gaatgcaaat atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tcatcttgg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500
 tctttggaca tgcacagttg atacagagtg atgatgat tggggatcac 550
 cagccttttg caaatgcaca cgtatgtgcta gcccgctccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tccaagagca gcgaaagtct gtctttgacc ggcatgttgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaaa tgcttgattt 850
 tttttctctg ttaacgtaat aatagagaca tttttaaag cacacagctc 900
 aaagtgcagc aataagtctt ttccattttg tgacttttac taataaaaaa 950
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 ttgtgtgttg ttgttttttg ttgttttggt ttggtgggag aggggaggga 1100
 tgccctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaat agaccttacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgaactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctggtggct ttccacaaaa agcagatttt ctctatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgctagatt 1400
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggtcgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtctg gggtgtgggt gcctcttctg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln
 140 145
 Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
 155 160 165
 Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
 170 175
 Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
 185 190 195
 Val Leu Ser

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccaccgtgag cagtcatggc gtactccaca gtgcagagag 50
 tcgctctggc ttctgggctt gtctctggctc tgcgctgct gctgcccaag 100
 gccttctcgt ccgcggggaa gcggcaggag ccgcccgcca cacctgaagg 150
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcacctcag 200
 atgggcagac tcttggggct cgtttccaga ggtctcacct tgccgaggca 250
 ttgcaaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300
 aagaggctct atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
 aacttttat agttcataaa attatttcaa atcoatcatc tctttaaatc 500
 ctgcctcctc ttcgatgagg acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgtt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtgtatata attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
cggtctcgagt gcagctgtgg ggagatttca gtgcattgcc tccccgggt 50
gctcttcctc ttggatttga aagttgagag cagcatgttt tgccactga 100
aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggagtgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggaagaata tgtgtatata 300
tattactcca atctcagtg gctatttggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tggtcaagaa ggcgggtgta ctgcatgtgc ttccagagga 500
gccccaaagag ctcatgttcc atgtgggttg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600
tcaggacggc ggcgaaagga ggagattgta tttcgttact accacaaact 650
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtggagg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctgtgt ttcaagaaaa ccatttgtct gcatgtcagc ccggaagagc 850
ctcgaaact ggtgaccccg gcagccctga ggccctctggt cttgggtggt 900
aatcagtttg tgatcattgt ggggaattgtc tgtgccacaa tctcgtctgt 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050
 aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100
 ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150
 aatcagaggc cacctacatg accatgcacc cagtttgccc ttctctgagg 1200
 tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
 ggtggagact ctctctgtg tgtgtcctgg gccactctac cagtgatttc 1350
 agactccgcg tctccagct gtctctctgt ctctattgtt ggtcaatata 1400
 ctgaagatgg agaatttga gcctggcaga gagactggac agctctggag 1450
 gaacaggcct gctgagggga ggggagcatg gactggcct ctggagtggg 1500
 aactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550
 ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
 gaatcagaga taaaaacaa cccaaatcaa 1630

<210> 422
 <211> 394
 <212> PRT
 <213> Homo sapiens

<400> 422
 Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp
 1 5 10 15
 Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
 20 25 30
 Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
 35 40 45
 Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
 50 55 60
 Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
 65 70 75
 Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
 80 85 90
 Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
 95 100 105
 Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
 110 115 120
 Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
 125 130 135
 Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
 140 145 150
 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

	155		160		165
Thr Lys Val Glu Trp	Ile Phe Ser Gly	Arg Arg Ala Lys Glu	Glu		
	170		175		180
Ile Val Phe Arg Tyr	Tyr His Lys Leu	Arg Met Ser Val Glu	Tyr		
	185		190		195
Ser Gln Ser Trp Gly	His Phe Gln Asn	Arg Val Asn Leu Val	Gly		
	200		205		210
Asp Ile Phe Arg Asn	Asp Gly Ser Ile	Met Leu Gln Gly Val	Arg		
	215		220		225
Glu Ser Asp Gly Gly	Asn Tyr Thr Cys	Ser Ile His Leu Gly	Asn		
	230		235		240
Leu Val Phe Lys Lys	Thr Ile Val Leu	His Val Ser Pro Glu	Glu		
	245		250		255
Pro Arg Thr Leu Val	Thr Pro Ala Ala	Leu Arg Pro Leu Val	Leu		
	260		265		270
Gly Gly Asn Gln Leu	Val Ile Ile Val	Gly Ile Val Cys Ala	Thr		
	275		280		285
Ile Leu Leu Leu Pro	Val Leu Ile Leu	Ile Val Lys Lys Thr	Cys		
	290		295		300
Gly Asn Lys Ser Ser	Val Asn Ser Thr	Val Leu Val Lys Asn	Thr		
	305		310		315
Lys Lys Thr Asn Pro	Glu Ile Lys Glu	Lys Pro Cys His Phe	Glu		
	320		325		330
Arg Cys Glu Gly Glu	Lys His Ile Tyr	Ser Pro Ile Ile Val	Arg		
	335		340		345
Glu Val Ile Glu Glu	Glu Glu Pro Ser	Glu Lys Ser Glu Ala	Thr		
	350		355		360
Tyr Met Thr Met His	Pro Val Trp Pro	Ser Leu Arg Ser Asp	Arg		
	365		370		375
Asn Asn Ser Leu Glu	Lys Lys Ser Gly	Gly Gly Met Pro Lys	Thr		
	380		385		390
Gln Gln Ala Phe					

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50
 ccactctcaca tggttctacc ctactaaaga caggaagatc ataaactgac 100
 agataactgaa attgtaagag ttggaacta cattttgcaa agtcattgaa 150
 cctcgagctc agttgcagta ctoggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250
 cctgcacccct cctcctggtg gcgtgtgatg gctttgattc tgctgaccc 300
 gtgcgtgggg atggttgctg ggctggtggc tctggggatt tggctctgca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggto ataaatgcag cccctgtgac aaaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacia cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtoga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatagtgtt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaaggc tggcatgacc 850
 aagggtgacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg
 1 5 10 15
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp
 20 25 30
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

125	130	135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile Lys
140	145	150
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln Lys
155	160	165
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser Glu
170	175	180
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn Cys
185	190	195
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu Asn
200	205	210
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys Val
215	220	225
Asp Gln Leu Pro		

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccccgtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tcccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21
 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 429
 gactgcctc cctgcc a 17
 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 430
 caaaaagcct ggaagtcttc aaag 24
 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 431
 cagctggact gcagtgcta 20
 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 432
 cagtggagcac agcaagtgtc ct 22
 <210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 433
 ggcacacctc ttgagtcttc agttccct 28
 <210> 434
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 434
caactactgg ctaaagctgg tgaa 24

<210> 435
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 435
cctttctgta taggtgatac ccaatga 27

<210> 436
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 436
tgccatccc taccagaggc aaaa 24

<210> 437
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 437
ctgaagacga cgcgattac ta 22

<210> 438
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 438
ggcagaaatg ggaggcaga 19

<210> 439
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 439
tgctctgttg gctacggctt tagtcctag 30

<210> 440
<211> 22

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 440
 agcagcagcc atgtagaatg aa 22

 <210> 441
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 441
 aatacgaaca gtgcacgctg at 22

 <210> 442
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 442
 tccagagagc caagcacggc aga 23

 <210> 443
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 443
 tctagccagc ttggctccaa ta 22

 <210> 444
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 444
 cctggcteta gcaccaactc ata 23

 <210> 445
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 445
 tcagtggccc taaggagatg ggcct 25

<210> 446
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 446
 caggatacag tgggaatctt gaga 24

 <210> 447
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 447
 cctgaagggc ttggagctta gt 22

 <210> 448
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 448
 tctttggcca tttcccatgg ctca 24

 <210> 449
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 449
 cccatggcga ggaggaat 18

 <210> 450
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 450
 tgcgtacgtg tgccttcag 19

 <210> 451
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 451
 cagcacccca ggcagtctgt gtgt 24

 <210> 452
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 452
 aacgtgctac acgaccagtg tact 24

 <210> 453
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 453
 cacagcatat tcagatgact aaatcca 27

 <210> 454
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 454
 ttgttttagtt ctccaccgtg tctccacaga a 31

 <210> 455
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 455
 tgtcagaatg caacctggct t 21

 <210> 456
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 456
 tgatgtgcct ggctcagaac 20

 <210> 457
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 457
 tgcacctaga tgtecccagc accc 24

 <210> 458
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 458
 aagatgcgcc aggettctta 20

 <210> 459
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 459
 ctctgtacg gctggtcac ttat 24

 <210> 460
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 460
 tggctgtcag tccagtgtgc atgg 24

 <210> 461
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 461
 gcatagggat agataagatc ctgctttat 29

 <210> 462
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 462
 caaatataag tacccatcag gagagaa 27

 <210> 463
 <211> 37

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
 aagttgctaa atatatacat tatotgcgcc aagtcca 37

 <210> 464
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgctca caattcatga 20

 <210> 465
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 465
 gtccttggtga tgggtctgaa ttatat 26

 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 466
 actctctgca cccacagtc accactatct c 31

 <210> 467
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 467
 ctgaggaacc agccatgtct ct 22

 <210> 468
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 468
 gaccagatgc aggtacagga tga 23

<210> 469
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 469
 ctgcccttc agt gatgcca acctt 25

 <210> 470
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 470
 gggtggaggc tca ctgagta ga 22

 <210> 471
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 471
 caatacaggt aatgaaactc tgcttctt 28

 <210> 472
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 472
 tcctcttaag cataggccat ttctcagtt tagaca 36

 <210> 473
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 473
 ggtggtcttg cttggtctca c 21

 <210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 474
 ccgtogttca gcaacatgac 20

 <210> 475
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 475
 accgcctacc gctgtgccca 20

 <210> 476
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 476
 cagtaaaacc acaggctgga ttt 23

 <210> 477
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 477
 cctgagagca agaaggttga gaat 24

 <210> 478
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 478
 tagacaggga ccatggcccg ca 22

 <210> 479
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 479
 tgggctgtag aagagttggt g 21

 <210> 480
 <211> 20
 <212> DNA
 <213> Artificial Sequence

```

<220>
<223> Synthetic oligonucleotide probe

<400> 480
tccacacttg gccagtttat 20

<210> 481
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 481
cccaacttct cccttttga ccct 24

<210> 482
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 482
gtcccttcac tgtttagagc atga 24

<210> 483
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 483
actctcccc tcaacagcct cctgag 26

<210> 484
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 484
gtggtcaggg cagatccttt 20

<210> 485
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 485
acagatccag gagagactcc aca 23

<210> 486
<211> 21

```

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 486
 agcggcgctc ccagcctgaa t 21

 <210> 487
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 487
 catgattggt cctcagttcc atc 23

 <210> 488
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 488
 atagagggct cccagaagtg 20

 <210> 489
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 489
 cagggccttc agggccttca c 21

 <210> 490
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggccctga cagtgtt 17

<210> 492
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 492
ctgagccgag actggagcat ctacac 26

<210> 493
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 493
gtgggcagcg tcttgctc 17

<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
cccacgcgtc cgcgagctcg cgagttctcg cctccgctcg ccagctctcg 50
ccgcgatccc ggcccggggc tgtggcgctcg actccgaccc aggcagccag 100
cagccccgcgc gggagccgga ccgcccgcgg aggagctcgg acggcatgct 150
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250
gaggagaagg aggaggaggc gaaccagag aggggcagca aaagaagcgg 300
tggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctcgctcctc 350
cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400
tgtcagcagc ccagcaaaag gcaagaccag ctgcgcacaa aacaagttaa 450
atgtcttttc cgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500
agaccagagc ctacagcttaa gggatatatt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggcggatgg aacattgat ggcaccaaaag 600
atgaggacag cacttacact ctgtttaacc tcattccctgt ggtctgcga 650
gtgtgggtgcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700
tgagggtatc ttgtacacct cggaactttt cacacctgag tgcaaatca 750
aagaatcagt gtttgaaaat tattatgtga catattcctc aatgatatac 800
cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaagaaggg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
 gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
 aagtgtctct ggcgtgetga acggaggcaa atccatgagc cacaatgaat 1050
 caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100
 ccagggtgctg ttgaattctt ctacgagtc cttacccaaa agttcaaatt 1150
 tgtcagtgac atttaccaa caaacaggca gagttcacta ttctatctgc 1200
 cattagacct tcttatcatc catactaaag c 1231

<210> 495
 <211> 245
 <212> PRT
 <213> Homo Sapien

<400> 495
 Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
 1 5 10 15
 Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
 20 25 30
 Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
 35 40 45
 Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
 50 55 60
 Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
 65 70 75
 Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
 80 85 90
 Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
 95 100 105
 Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
 110 115 120
 Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
 125 130 135
 Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
 140 145 150
 Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
 155 160 165
 Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
 170 175 180
 Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
 185 190 195
 Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
 200 205 210
 Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

Figure 1

Figure 6

(a) H_2O (b) CO_2 (c) CH_4 (d) C_2H_6 (e) C_3H_8 (f) C_4H_{10} (g) C_5H_{12} (h) C_6H_{14} (i) C_7H_{16} (j) C_8H_{18} (k) C_9H_{20} (l) $\text{C}_{10}\text{H}_{22}$ (m) $\text{C}_{11}\text{H}_{24}$ (n) $\text{C}_{12}\text{H}_{26}$ (o) $\text{C}_{13}\text{H}_{28}$ (p) $\text{C}_{14}\text{H}_{30}$ (q) $\text{C}_{15}\text{H}_{32}$ (r) $\text{C}_{16}\text{H}_{34}$ (s) $\text{C}_{17}\text{H}_{36}$ (t) $\text{C}_{18}\text{H}_{38}$ (u) $\text{C}_{19}\text{H}_{40}$ (v) $\text{C}_{20}\text{H}_{42}$ (w) $\text{C}_{21}\text{H}_{44}$ (x) $\text{C}_{22}\text{H}_{46}$ (y) $\text{C}_{23}\text{H}_{48}$ (z) $\text{C}_{24}\text{H}_{50}$ (aa) $\text{C}_{25}\text{H}_{52}$ (ab) $\text{C}_{26}\text{H}_{54}$ (ac) $\text{C}_{27}\text{H}_{56}$ (ad) $\text{C}_{28}\text{H}_{58}$ (ae) $\text{C}_{29}\text{H}_{60}$ (af) $\text{C}_{30}\text{H}_{62}$ (ag) $\text{C}_{31}\text{H}_{64}$ (ah) $\text{C}_{32}\text{H}_{66}$ (ai) $\text{C}_{33}\text{H}_{68}$ (aj) $\text{C}_{34}\text{H}_{70}$ (ak) $\text{C}_{35}\text{H}_{72}$ (al) $\text{C}_{36}\text{H}_{74}$ (am) $\text{C}_{37}\text{H}_{76}$ (an) $\text{C}_{38}\text{H}_{78}$ (ao) $\text{C}_{39}\text{H}_{80}$ (ap) $\text{C}_{40}\text{H}_{82}$ (aq) $\text{C}_{41}\text{H}_{84}$ (ar) $\text{C}_{42}\text{H}_{86}$ (as) $\text{C}_{43}\text{H}_{88}$ (at) $\text{C}_{44}\text{H}_{90}$ (au) $\text{C}_{45}\text{H}_{92}$ (av) $\text{C}_{46}\text{H}_{94}$ (aw) $\text{C}_{47}\text{H}_{96}$ (ax) $\text{C}_{48}\text{H}_{98}$ (ay) $\text{C}_{49}\text{H}_{100}$ (az) $\text{C}_{50}\text{H}_{102}$ (ba) $\text{C}_{51}\text{H}_{104}$ (bb) $\text{C}_{52}\text{H}_{106}$ (bc) $\text{C}_{53}\text{H}_{108}$ (bd) $\text{C}_{54}\text{H}_{110}$ (be) $\text{C}_{55}\text{H}_{112}$ (bf) $\text{C}_{56}\text{H}_{114}$ (bg) $\text{C}_{57}\text{H}_{116}$ (bh) $\text{C}_{58}\text{H}_{118}$ (bi) $\text{C}_{59}\text{H}_{120}$ (bj) $\text{C}_{60}\text{H}_{122}$ (bk) $\text{C}_{61}\text{H}_{124}$ (bl) $\text{C}_{62}\text{H}_{126}$ (bm) $\text{C}_{63}\text{H}_{128}$ (bn) $\text{C}_{64}\text{H}_{130}$ (bo) $\text{C}_{65}\text{H}_{132}$ (bp) $\text{C}_{66}\text{H}_{134}$ (bq) $\text{C}_{67}\text{H}_{136}$ (br) $\text{C}_{68}\text{H}_{138}$ (bs) $\text{C}_{69}\text{H}_{140}$ (bt) $\text{C}_{70}\text{H}_{142}$ (bu) $\text{C}_{71}\text{H}_{144}$ (bv) $\text{C}_{72}\text{H}_{146}$ (bw) $\text{C}_{73}\text{H}_{148}$ (bx) $\text{C}_{74}\text{H}_{150}$ (by) $\text{C}_{75}\text{H}_{152}$ (bz) $\text{C}_{76}\text{H}_{154}$ (ca) $\text{C}_{77}\text{H}_{156}$ (cb) $\text{C}_{78}\text{H}_{158}$ (cc) $\text{C}_{79}\text{H}_{160}$ (cd) $\text{C}_{80}\text{H}_{162}$ (ce) $\text{C}_{81}\text{H}_{164}$ (cf) $\text{C}_{82}\text{H}_{166}$ (cg) $\text{C}_{83}\text{H}_{168}$ (ch) $\text{C}_{84}\text{H}_{170}$ (ci) $\text{C}_{85}\text{H}_{172}$ (cj) $\text{C}_{86}\text{H}_{174}$ (ck) $\text{C}_{87}\text{H}_{176}$ (cl) $\text{C}_{88}\text{H}_{178}$ (cm) $\text{C}_{89}\text{H}_{180}$ (cn) $\text{C}_{90}\text{H}_{182}$ (co) $\text{C}_{91}\text{H}_{184}$ (cp) $\text{C}_{92}\text{H}_{186}$ (cq) $\text{C}_{93}\text{H}_{188}$ (cr) $\text{C}_{94}\text{H}_{190}$ (cs) $\text{C}_{95}\text{H}_{192}$ (ct) $\text{C}_{96}\text{H}_{194}$ (cu) $\text{C}_{97}\text{H}_{196}$ (cv) $\text{C}_{98}\text{H}_{198}$ (cw) $\text{C}_{99}\text{H}_{200}$ (cx) $\text{C}_{100}\text{H}_{202}$ (cy) $\text{C}_{101}\text{H}_{204}$ (cz) $\text{C}_{102}\text{H}_{206}$ (da) $\text{C}_{103}\text{H}_{208}$ (db) $\text{C}_{104}\text{H}_{210}$ (dc) $\text{C}_{105}\text{H}_{212}$ (dd) $\text{C}_{106}\text{H}_{214}$ (de) $\text{C}_{107}\text{H}_{216}$ (df) $\text{C}_{108}\text{H}_{218}$ (dg) $\text{C}_{109}\text{H}_{220}$ (dh) $\text{C}_{110}\text{H}_{222}$ (di) $\text{C}_{111}\text{H}_{224}$ (dj) $\text{C}_{112}\text{H}_{226}$ (dk) $\text{C}_{113}\text{H}_{228}$ (dl) $\text{C}_{114}\text{H}_{230}$ (dm) $\text{C}_{115}\text{H}_{232}$ (dn) $\text{C}_{116}\text{H}_{234}$ (do) $\text{C}_{117}\text{H}_{236}$ (dp) $\text{C}_{118}\text{H}_{238}$ (dq) $\text{C}_{119}\text{H}_{240}$ (dr) $\text{C}_{120}\text{H}_{242}$ (ds) $\text{C}_{121}\text{H}_{244}$ (dt) $\text{C}_{122}\text{H}_{246}$ (du) $\text{C}_{123}\text{H}_{248}$ (dv) $\text{C}_{124}\text{H}_{250}$ (dw) $\text{C}_{125}\text{H}_{252}$ (dx) $\text{C}_{126}\text{H}_{254}$ (dy) $\text{C}_{127}\text{H}_{256}$ (dz) $\text{C}_{128}\text{H}_{258}$ (ea) $\text{C}_{129}\text{H}_{260}$ (eb) $\text{C}_{130}\text{H}_{262}$ (ec) $\text{C}_{131}\text{H}_{264}$ (ed) $\text{C}_{132}\text{H}_{266}$ (ee) $\text{C}_{133}\text{H}_{268}$ (ef) $\text{C}_{134}\text{H}_{270}$ (eg) $\text{C}_{135}\text{H}_{272}$ (eh) $\text{C}_{136}\text{H}_{274}$ (ei) $\text{C}_{137}\text{H}_{276}$ (ej) $\text{C}_{138}\text{H}_{278}$ (ek) $\text{C}_{139}\text{H}_{280}$ (el) $\text{C}_{140}\text{H}_{282}$ (em) $\text{C}_{141}\text{H}_{284}$ (en) $\text{C}_{142}\text{H}_{286}$ (eo) $\text{C}_{143}\text{H}_{288}$ (ep) $\text{C}_{144}\text{H}_{290}$ (eq) $\text{C}_{145}\text{H}_{292}$ (er) $\text{C}_{146}\text{H}_{294}$ (es) $\text{C}_{147}\text{H}_{296}$ (et) $\text{C}_{148}\text{H}_{298}$ (eu) $\text{C}_{149}\text{H}_{300}$ (ev) $\text{C}_{150}\text{H}_{302}$ (ew) $\text{C}_{151}\text{H}_{304}$ (ex) $\text{C}_{152}\text{H}_{306}$ (ey) $\text{C}_{153}\text{H}_{308}$ (ez) $\text{C}_{154}\text{H}_{310}$ (fa) $\text{C}_{155}\text{H}_{312}$ (fb) $\text{C}_{156}\text{H}_{314}$ (fc) $\text{C}_{157}\text{H}_{316}$ (fd) $\text{C}_{158}\text{H}_{318}$ (fe) $\text{C}_{159}\text{H}_{320}$ (ff) $\text{C}_{160}\text{H}_{322}$ (fg) $\text{C}_{161}\text{H}_{324}$ (fh) $\text{C}_{162}\text{H}_{326}$ (fi) $\text{C}_{163}\text{H}_{328}$ (fj) $\text{C}_{164}\text{H}_{330}$ (fk) $\text{C}_{165}\text{H}_{332}$ (fl) $\text{C}_{166}\text{H}_{334}$ (fm) $\text{C}_{167}\text{H}_{336}$ (fn) $\text{C}_{168}\text{H}_{338}$ (fo) $\text{C}_{169}\text{H}_{340}$ (fp) $\text{C}_{170}\text{H}_{342}$ (fq) $\text{C}_{171}\text{H}_{344}$ (fr) $\text{C}_{172}\text{H}_{346}$ (fs) $\text{C}_{173}\text{H}_{348}$ (ft) $\text{C}_{174}\text{H}_{350}$ (fu) $\text{C}_{175}\text{H}_{352}$ (fv) $\text{C}_{176}\$

[illegible]

gcctggacaa ggagggccag gtcataagagg gaaaccgagt taagaagacc 1300
 aaggcagctg cccactttct gcccaagctc ctggaggtgg ccattgtacca 1350
 ggagccttct ctccacagtg tcccgcaggc ctccccctcc agtccccctg 1400
 ccccctgaaa tgtagtccct ggactggagg ttcctgtcac tcccagttag 1450
 ccagccacca ccacaacctg t 1471

<210> 497
 <211> 225
 <212> PRT
 <213> Homo Sapien

<400> 497
 Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val
 1 5 10 15
 Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val
 20 25 30
 Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
 35 40 45
 Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
 50 55 60
 Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
 65 70 75
 Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
 80 85 90
 Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
 95 100 105
 Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
 110 115 120
 Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
 125 130 135
 Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
 140 145 150
 Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
 155 160 165
 Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
 170 175 180
 Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
 185 190 195
 Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
 200 205 210
 Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
 215 220 225

<210> 498
 <211> 744

<212> DNA
<213> Homo Sapien

<400> 498
atggccgcgg ccatcgctag cggttgcgc cgccagaagc ggcaggcgcg 50
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat ctctccaaa 150
gtgcgcctat tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccca 200
gctcaagggg atagtacca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350
gggagtgaac acagggttgt atatagccat gaatggagaa ggttacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500
tggtagagcc tgggttttgg gattaaataa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
ttggaagtgt ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650
ggtccccaag cctggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700
taatgaatgg aggcacaacca gtcaacaaga gtaagacaac atag 744

<210> 499
<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln 15
1 5 10
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg 30
20 25
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val 45
35 40
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60
50 55
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75
65 70
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90
80 85
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105
95 100
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120
110 115

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
 125 130 135
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe
 140 145 150
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln
 155 160 165
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln
 170 175 180
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His
 185 190 195
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser
 200 205 210
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro
 215 220 225
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
 230 235 240
 Val Asn Lys Ser Lys Thr Thr
 245

<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 500
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtggtgt 50
 ggctgttggg tgccttgcaa aaatgaagga tgcaggacgc agctttctcc 100
 tggaaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtgtt ctgacataaa taaataatct taaagcagct gttccctccc 300
 ccaccccaaa aaaaaaggat gattggaat gaagaaccga ggattcacaa 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggcct ttttagtaaa gtaagaagct 450
 ggtgtggttg tgttttcctt tctttttgaa tttccocaa gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
 ttcatacaac tccttttttt taaattttta ttcttttttg tatcaagatc 700
 atgcgttttc tctgttctt aaccacctgg atttccatct ggatgtgtgt 750

gtgatcagtc tgaatacaaa ctgtttgaat tccagaagga ccaacaccag 800
 ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850
 ataggctcta ggtttaacag ggccctattt gacccccctgc ttgtggtgct 900
 gctggctctt caactctctg tgggtgctgg tctggtgcgg gctcagacct 950
 gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gattttgtgt 1000
 cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050
 gctgaacctc catgagaacc aatccagat catcaaagt aacagcttca 1100
 agcacttgag gcacttgga atcctacagt tgagtaggaa ccatatcaga 1150
 accattgaaa ttggggcttt caatggtctg gcgaacctca acactctgga 1200
 actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250
 tgtctaaact gaaggagctc tggttgcgaa acaaccccat tgaaagcatc 1300
 ccttcttatg cttttaacag aattccttct ttgcgccag tagacttagg 1350
 ggaattgaaa agactttcat acatctcaga agtgcccttt gaaggtctgt 1400
 ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaatccct 1450
 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
 tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550
 aactgttgat gatacagtc cagattcaag tgattgaacg gaatgccttt 1600
 gacaaccttc agtcactagt ggagatcaac ctggcacaca ataactaac 1650
 attactgcct catgacctct tcaactccct gcacatcta gagcggatc 1700
 atttacatca caacccttg aactgtaact gtgacatact gtggctcagc 1750
 tgggtggataa aagacatggc ccctcgaac acagcttggt gtgcccggtg 1800
 taacactcct cccaatctaa aggggaggtc cattggagag ctgcaccaga 1850
 attacttcaac atgctatgct ccggtgattg tggagcccc tgacagctc 1900
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950
 cctgacatct gtatcttgga ttactccaaa tggaacagtc atgacacatg 2000
 gggcgataca agtgcggata gctgtgctca gtgatggatc gttaaatttc 2050
 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtagtaaa 2100
 ttccgttggtg aatactactg cttcagccac cctgaatgtt atgcgacaa 2150
 ccactatcct tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgt ggtccactcc 2250
 agtggtcgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
 gcacaaggtc gacagagaaa accttcacca tcccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggtcatg aagactacca aaatcatcat 2400
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaagc caccctgccca tgctgtctat cgagcatgag cacctaaatc 2600
 actataactc atacaatct cccctcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcagtga cgttatttg tccgaatgaa 2700
 ctctaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaacaaa 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaagcaga 2900
 caaaaa 2906

<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501

Met	Leu	Asn	Lys	Met	Thr	Leu	His	Pro	Gln	Gln	Ile	Met	Ile	Gly
1				5					10					15
Pro	Arg	Phe	Asn	Arg	Ala	Leu	Phe	Asp	Pro	Leu	Leu	Val	Val	Leu
				20					25					30
Leu	Ala	Leu	Gln	Leu	Leu	Val	Val	Ala	Gly	Leu	Val	Arg	Ala	Gln
				35					40					45
Thr	Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val
				50					55					60
Ile	Cys	Val	Arg	Lys	Asn	Leu	Arg	Glu	Val	Pro	Asp	Gly	Ile	Ser
				65					70					75
Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile
				80					85					90
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu
				95					100					105
Gln	Leu	Ser	Arg	Asn	His	Ile	Arg	Thr	Ile	Glu	Ile	Gly	Ala	Phe
				110					115					120
Asn	Gly	Leu	Ala	Asn	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Arg
				125					130					135
Leu	Thr	Thr	Ile	Pro	Asn	Gly	Ala	Phe	Val	Tyr	Leu	Ser	Lys	Leu
				140					145					150
Lys	Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser
				155					160					165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly
				170					175					180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly
				185					190					195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg
				200					205					210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp
				215					220					225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln
				230					235					240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile
				245					250					255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val
				260					265					270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp
				275					280					285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His
				290					295					300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp
				305					310					315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys
				320					325					330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp
				335					340					345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro
				350					355					360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys
				365					370					375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn
				380					385					390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val
				395					400					405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp
				410					415					420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr
				425					430					435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro
				440					445					450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser
				455					460					465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro
				470					475					480

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro	
				485					490					495	
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr	
				500					505					510	
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr	
				515					520					525	
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala	
				530					535					540	
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His	
				545					550					555	
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn	
				560					565					570	
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu	
				575					580					585	
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser	
				590					595					600	
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn	
				605					610					615	
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn	
				620					625					630	
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile						
				635					640						

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
 gcgcggggag cccatctgcc ccaggggca cggggcgcg ggccggtcc 50
 cgcccgac atggtctcag ccacctcg cgaccccg ggccgcgcg 100
 ccagctgcc cgaggtccgt cggaggcgcc cggccgccc ggagccaagc 150
 agcaactgag cggggaagcg ccgcgctcc gggatcgga tgcctctct 200
 ccttctctc ttgctagttt cctactatgt tggaaacctg gggactcaca 250
 ctgagatcaa gagagtggca gaggaagag tcactttgoc ctgccaccat 300
 caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350
 cgataatgaa gggaacccaa aagtgtgat cacttactcc agtgcgtacg 400
 tctacaataa cttgactgag gaacagaag gccgagtggc ctttgcctcc 450
 aatttctgag caggagatgc ctcttgacg attgaacctg tgaagcccag 500
 tgatgagggc cggtacacct gtaagggtta gaattcagg cgctacgtgt 550
 ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccaagtgt 600

agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250
 tctcttcttt ctgagaaaa gtgaaaccag aattgcaaga ctgggtggac 2300
 tagaaagga gattagatca gttttctctt aatagtcaa ggaaggtagc 2350
 cgggcatggt gccaggcacc ttaggaaaa tccagcaggt ggaggttgca 2400
 gtgagccgag attatgccat tgcactccag cctgggtgac agagcgggac 2450
 tccgtctc 2458

<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503
 Met Ser Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly
 1 5 10 15
 Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys
 20 25 30
 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
 170 175 180
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
 185 190 195
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
 200 205 210
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
 215 220 225

Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly	
			230						235					240	
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu	
			245						250					255	
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro	
			260						265					270	
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val	
			275						280					285	
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	
			290						295					300	
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln	
			305						310					315	
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr	
			320						325					330	
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	
			335						340					345	
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	
			350						355					360	
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val			
			365						370						

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50
 cgcgcgcca cggcacggca gccaccatgg cgctcctgct gtgcttcgtg 100
 ctccctgtgcg gagtagtgga ttctgccaga agtttgagta tcactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttaogct tagtcccgaa gaccagggac cgctggacat cgagtggtcg 250
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350
 attttaogag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aatttacaac tgtcagatat tggcacatat cagtgcacaa tgaaaaaagc 450
 tctctggtgt gcaaataaga agattcatct ggtagttctt gttaaagcct 500
 caggtgcgag atgttacgtt gatggatctg aagaaattgg aagtgacttt 550
 aagataaaat gtgaacacaa agaaggttca cttccattac agtatgagtg 600
 gcaaaaattg tctgactcac agaaaatgcc cacttcattg ttagcagaaa 650
 tgacttcac tggtatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgccgtgt 750
 gcgtctaaac gttgtccctc ctccaataa agctggacta attgcaggag 800
 ccattatag gaaattgtt gctctagcgc tcattgggtc tatcatcttt 850
 tgctgtcgt aaaagcgcag agaagaaaaa tatgaaaagg aagttcatca 900
 cgatatacag gaagatgtgc cacctccaaa gagccgtacg tccactgcc 950
 gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000
 aacatggaag gatattccaa gactcagtat aaccaagtac caagtgaaga 1050
 ctttgaacgc actctcaga gtccgactct cccacctgct aagttcaagt 1100
 acccttaca gactgatgga attacagttg tataaatatg gactactgaa 1150
 gaatctgaag tattgtatta tttagcttta ttttaggctc ctagttaaaga 1200
 cttaaatgtt ttttaaaaa agcacaaggc acagagatta gagcagctgt 1250
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300
 atgtcaaat tagtacgagc caaattcttt gttaaaaaac cctatgtata 1350
 gtgacactga tagttaaaag atgttttatt atattttcaa taactaccac 1400
 taacaaattt ttaacttttc atatgcata tctgatatgt ggtcttttag 1450
 gaaaagtat gttaatagtt gatttttcaa aggaaatttt aaaattctta 1500
 cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaata 1550
 cccgttcttt tcccctttta tgcacacaac agaaacacgc gttgtcagtc 1600
 ctcaaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650
 acaacgacat aaaatagatt tcttgtata taaataaact acatacgctc 1700
 cataaagtaa attctcaaag gtgctagaac aaatogtcca ctctacagt 1750
 gttctcgtat ccaacagagt tgatgcacaa tatataaata ctcaagtcca 1800
 atattaaaaa cttaggcact tgactaactt taataaaatt tctcaaaacta 1850
 tatcaatc taaagtgc atatttttta agaaagatta ttctcaataa 1900
 ctctataaaa aataagtttg atggtttggc ccactctaa ctactactat 1950
 tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000
 tctcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050
 atgtgaggat taatccagtg attccggtca caatgcattc caggaggagg 2100
 taccocatgc actggaattg ggcgatatgg tttatttttt ctccctgat 2150
 ttggataacc aaatggaaca ggaggaggat agtgattctg atggccattc 2200
 cctcgatata ttcttggtt ttttctgggc aaaggggtgc acattggaag 2250
 aggtggaat ataagttctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaagg aaaaaatcat catctatgtt ccagatttct cattaagac 2350
aaagttaccc acaacactga gatcacatct aagtgacact cctattgtca 2400
ggctaaata cattaanaac ctcatgtgta ataggcggtat aatgtataac 2450
aggtgaccac tggtttctga atgcataaag aatgaataa actcaaacac 2500
agtacttct aaacaacttc aacaaaaaaa gacaaaaaca tggacgaat 2550
ggaagcttgt aaggacatgc ttgttttagt ccagtggttt ccacagctgg 2600
ctaagccagg agtcacttgg aggcctttaa atacaaaaa ttggagctgg 2650
agggcattat ccttagcaaa ctaatgcaga aacagaaaa caactaccgc 2700
atgtttctac ttataagtgg gaggtaatga taagaactta tgaacacaaa 2750
gaaggaaaca atagacattg gagtctattt gagaggggag ggtgggagaa 2800
ggaaaaggag cagaaaagat aactattgag tactgccttc acacctgggt 2850
gatgaaataa tatgtacaac aaatccctgt gacacatgtt tacctatgga 2900
acaaaccttc atgtgtatcc ctaaacctaa aataaaaagt aaaaaaaaaa 2950
aaaaaiaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3000
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3050
aaaaaaaaa 3060

<210> 505
<211> 352
<212> PRT
<213> Homo Sapien

<400> 505
Met Ala Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp
1 5 10 15
Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu
20 25 30
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
35 40 45
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
50 55 60
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
65 70 75
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
80 85 90
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
95 100 105
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
110 115 120
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125		130		135
Val Val Leu Val Lys Pro Ser Gly Ala Arg Cys Tyr Val Asp Gly	140		145		150
Ser Glu Glu Ile Gly Ser Asp Phe Lys Ile Lys Cys Glu Pro Lys	155		160		165
Glu Gly Ser Leu Pro Leu Gln Tyr Glu Trp Gln Lys Leu Ser Asp	170		175		180
Ser Gln Lys Met Pro Thr Ser Trp Leu Ala Glu Met Thr Ser Ser	185		190		195
Val Ile Ser Val Lys Asn Ala Ser Ser Glu Tyr Ser Gly Thr Tyr	200		205		210
Ser Cys Thr Val Arg Asn Arg Val Gly Ser Asp Gln Cys Leu Leu	215		220		225
Arg Leu Asn Val Val Pro Pro Ser Asn Lys Ala Gly Leu Ile Ala	230		235		240
Gly Ala Ile Ile Gly Thr Leu Leu Ala Leu Ala Leu Ile Gly Leu	245		250		255
Ile Ile Phe Cys Cys Arg Lys Lys Arg Arg Glu Glu Lys Tyr Glu	260		265		270
Lys Glu Val His His Asp Ile Arg Glu Asp Val Pro Pro Pro Lys	275		280		285
Ser Arg Thr Ser Thr Ala Arg Ser Tyr Ile Gly Ser Asn His Ser	290		295		300
Ser Leu Gly Ser Met Ser Pro Ser Asn Met Glu Gly Tyr Ser Lys	305		310		315
Thr Gln Tyr Asn Gln Val Pro Ser Glu Asp Phe Glu Arg Thr Pro	320		325		330
Gln Ser Pro Thr Leu Pro Pro Ala Lys Phe Lys Tyr Pro Tyr Lys	335		340		345
Thr Asp Gly Ile Thr Val Val	350				

<210> 506

<211> 1705

<212> DNA

<213> Homo Sapien

<400> 506

tgaaatgact tccacggctg ggacgggaac cttccacca cagctatgcc 50

tctgattggt gaatggtgaa ggtgcctgtc taacttttct gtaaaaagaa 100

ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150

ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200

gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaattt tcaacagagg ctgcaaagcc tgtggacttt agccagaccc 300
 ttctgccttc ctttctggc gacagcctct caaatgcaga tggttgtgct 350
 cccttgccctg gggtttaccc tgetttctctg gagccaggta tcagggggccc 400
 agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450
 cagaaactgt gggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
 ggataacatc acgagtgtcc ggctgtgtga gcaggagggt ctgcagaacg 550
 tctcgtagtc tgagagctgt taccttgttc acaccctgct ggagtcttac 600
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtccaggac 650
 tctgaagtca ttctctactc tggccaacaa ctttgttctc atcgtgtcac 700
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgtca 750
 cacaggcggt ttctgtctatt ccggagagca ttcaaacagt tggacgtaga 800
 agcagctctg accaaagccc ttggggaagt ggacattctt ctgacctgga 850
 tgcagaaatt ctacaagctc tgaatgtcta gaccaggacc tccctccccc 900
 tggcactggg ttgttccctg tgtcatttca aacagtctcc ctctctatgc 950
 tgttcactgg acaacttcacg ccccttgcca tgggtcccat tcttgcccca 1000
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050
 gaagtgctct ctggatgctg tgaagagtc acagagaaga ttctgttatt 1100
 tattacaact ctatttaatt aatgtcagta ttccaactga agttctattt 1150
 atttgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250
 cttagtaagt acttaataaa ctgtggtgct ttttttgccc tgtctttgga 1300
 ttgttaaaaa acagagaggg atgcttggat gtaaaactga acttcagagc 1350
 atgaaaaatca cactgtcttc tgatatctgc agggacagag cattgggggtg 1400
 ggggtaaggt gcatctgttt gaaaagttaa cgataaaatg tggattaaag 1450
 tgcccagcac aaagcagatc ctcaataaac atttcatttc ccaccacac 1500
 tcgccagctc accccatcat ccttttccct tggtgccctc cttttttttt 1550
 taccctagtc attcttccct aatcttccac ttgagtgtca agctgacctt 1600
 gctgatgggt acattgcacc tggagtact atccaactct tgatgacatt 1650
 cctgtctaata aaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700
 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg	
1				5					10					15	
Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met	
				20					25					30	
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln	
				35					40					45	
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln	
				50					55					60	
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala	
				65					70					75	
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg	
				80					85					90	
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser	
				95					100					105	
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val	
				110					115					120	
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys	
				125					130					135	
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln	
				140					145					150	
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser	
				155					160					165	
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu	
				170					175					180	
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile	
				185					190					195	
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu					
				200					205						

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

aaggagcagc cgcgaagcac caagtgcagc gcacgaagtt acagtgtgtt 50
tccctttggc tctcgggtac aatactgata ttgtgtcag tagacaacca 100
cggtctcagg agatgtctga ttccacaga catgcacat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac ctccccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgtctg gtgaccaaga acctcctggc gttctactgt gacagggtgt 300

tcaaggatca tcaggagcca aacccccaaa tcttgagaaa aatcagcagc 350
 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
 acaggaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
 tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaatatcc 500
 ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
 aatgtttctca gcttgatgac aaggaaacctg tatagtgtac cagggtgaa 600
 caccctctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650
 agatggggaa ggcctctgc agctgaaagt cccactggct ggcctcaggc 700
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtattgttaa 750
 taaactctat ctgctgaaag ggcctgcagg ccactcctgg agtaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
 tgagccaagt gatatactgt agtacacatt gtactgagtg gttttctga 900
 ataaattcca tattttacct atga 924

<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 55 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
cccgtgccaa gaggtagcgt agtaccgcct atagagtcta taggcccact 50
tggtctcggt agaacgcggc tacaattaat acataacctt atgtatcata 100
cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150
tccacaggtg tccactccca ggtccaaactg cacctcgggt ctatcgataa 200
ttctcagcacc agccactcag agcagggcac gatgttgggg gccgcctca 250
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtcctcaga 300
gcctatccca atgcctccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccagggaacag ctaccacctg catatccaca 400
agaattggcca tgtggatggc gcaccccatc agaccatcta cagtgccttg 450
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
atttcgaccc ggagaactgc aggttccaac accagacgct ggaatacggg 600
tacgacgtct accactctcc tcagtatcac ttctgtgtca gtctgggccc 650
ggcgaagaga gccttctctg caggcatgaa cccacccccg tactcccagt 700
tcctgtcccg gaggaacgag atccccctaa ttcaattcaa ccccccata 750
ccacggcggc acacccggag cgcgagggac gactcggagc gggaccccct 800
gaacgtgctg aagccccggg cccggatgac cccggccccg gcctcctgtt 850
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaacca 900
ttaggggttg tcaggggcgg tcgagtgaac acgcaogctg ggggaacggg 950
cccggaaggc tgcgcccct tcgccaagtt catctagggt cgctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
1 5 10 15
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu Leu Gly Ser Ser Trp Gly Gly Leu Ile His Leu Tyr Thr Ala
 35 45
 Thr Ala Arg Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His
 50 55 60
 Val Asp Gly Ala Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile
 65 70 75
 Arg Ser Glu Asp Ala Gly Phe Val Val Ile Thr Gly Val Met Ser
 80 85 90
 Arg Arg Tyr Leu Cys Met Asp Phe Arg Gly Asn Ile Phe Gly Ser
 95 100 105
 His Tyr Phe Asp Pro Glu Asn Cys Arg Phe Gln His Gln Thr Leu
 110 115 120
 Glu Asn Gly Tyr Asp Val Tyr His Ser Pro Gln Tyr His Phe Leu
 125 130 135
 Val Ser Leu Gly Arg Ala Lys Arg Ala Phe Leu Pro Gly Met Asn
 140 145 150
 Pro Pro Pro Tyr Ser Gln Phe Leu Ser Arg Arg Asn Glu Ile Pro
 155 160 165
 Leu Ile His Phe Asn Thr Pro Ile Pro Arg Arg His Thr Arg Ser
 170 175 180
 Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro
 185 190 195
 Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu
 200 205 210
 Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly
 215 220 225
 Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly
 230 235 240
 Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile
 245 250

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
 ggaaaaggtgta cccgcgagag acagccagca gttctgtgga gcagcgggtgg 50
 ccggcttagga tgggctgtct ctggggtctg gctctgcccc ttttcttctt 100
 ctgctgggag gttggggtct ctgggagctc tgcaggcccc agcaccgcga 150
 gacgacagac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctgacaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
 ctcttctagg gctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag ttccacaaaa 350
 acatctccca acttcattgt gctgatcgcc acctccgtgg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccaggagg gccatctttg acaccccttg caccgatgac 500
 agctctgaag aggcaaagac actcacaatg gacatattga cattggctca 550
 cacctccaca gaagctaagg gctgtcctc agagagcagt gcctcttcgg 600
 acggccccc tccagtcac accccgtcac gggcctcaga gacgagcgcc 650
 tcttcgcagc gcccocatcc agtcacacc ccgtcacggg cctcagagag 700
 cagcgctctc tccgacggcc cccatccagt catcaccccg tcatggctcc 750
 cgggatctga tgtcactctc ctgcgtgaag cctggtgac tgtcacaaa 800
 atcgaggtta ttaattgcag catcacagaa atagaacaa caactccag 850
 catccctggg gcctcagaca tagatctcat cccacggaa ggggtgaagg 900
 cctcgtcac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
 ccacacatca ctgaggctcac agcctctgcc gagaccctgt ccacagccgg 1000
 caccacagag tcagctgcac ctcatgccac ggttgggacc cactcccca 1050
 ctaacacggc cacagaaaga gaagtgcagc caccggggc cagcacctc 1100
 agtggagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150
 cctctctgtt gagacacaa gttacgtcaa agtctcagga gcagctccgg 1200
 tctccataga ggctgggtca gcagtggga aaacaacttc ctttctggg 1250
 agctctgctt cctctacag cccctcgaa gccgccctca agaacttcac 1300
 cccttcagag acaccgacca tggacatgc aaccaagggg ccttcccca 1350
 ccagcaggga cctcttctt tctgtccctc cgactacaac caacagcagc 1400
 cgaggagca acagcacctt agccaagatc acaacctcag cgaagaccac 1450
 gatgaagccc caacagccac gccacgact gcccggaaga ggccgaccac 1500
 agacgtgagt gcagtgaaa atggagggtt cctcctctcg cggctgagt 1550
 tggcttcccc ggaagacctc actgaccoca gaggggcaga aaggctgatg 1600
 cagcagctcc accgggaact ccacgcccac ggcctcact tccaggtctc 1650
 cttactcgct gtcaggagag gctaaccggac atcagctgca gccaggcatg 1700
 tccgtatgc caaaagaggg tgctgccctc agcctgggcc cccaccgaca 1750
 gactgcagct gcgttactgt gctgagaggt acccagaagg ttcccatgaa 1800
 gggcagcatg tcaagcccc taacccaga tgtggcaaca ggacctcgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttccaga 1900

ggtgtccttg gactcacctt ggcacatgtt ctgtgtttca gtaaagagag 1950
 acctgatcac coactctgtgt gcttccatcc tgcattaaaa ttcaactcagt 2000
 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
 Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
 1 5 10 15
 Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
 20 25 30
 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr Glu Ile Glu Thr Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp
 260 265 270
 Ile Asp Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser
 275 280 285
 Asp Pro Pro Ala Leu Pro Asp Ser Thr Glu Ala Lys Pro His Ile
 290 295 300
 Thr Glu Val Thr Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr
 305 310 315
 Thr Glu Ser Ala Ala Pro His Ala Thr Val Gly Thr Pro Leu Pro
 320 325 330
 Thr Asn Ser Ala Thr Glu Arg Glu Val Thr Ala Pro Gly Ala Thr
 335 340 345
 Thr Leu Ser Gly Ala Leu Val Thr Val Ser Arg Asn Pro Leu Glu
 350 355 360
 Glu Thr Ser Ala Leu Ser Val Glu Thr Pro Ser Tyr Val Lys Val
 365 370 375
 Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly
 380 385 390
 Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro
 395 400 405
 Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr
 410 415 420
 Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro
 425 430 435
 Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser Arg Gly Thr
 440 445 450
 Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys Thr Thr Met
 455 460 465
 Lys Pro Gln Gln Pro Arg Pro Arg Leu Pro Gly Arg Gly Arg Pro
 470 475 480
 Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

<400> 514
 gcggagcatc cgctgcggtc ctgcccagaga cccccgcgcg gattcgccgg 50
 tccttcccgc gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
 ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
 cttcttaaa gaaactaaga ccagaggagg gattatcctt gacctttgaa 200
 gaccaaaact aaactgaaat ttaaaatggt cttcggggga gaaggagact 250

tgacttacac ttggttaata atttgcttcc tgacactaag gctgtctgct 300
 agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
 gtcatctctt tctaagggaa tcagaggcaa tgagcccgta tatacttcaa 400
 ctcaagaaga ctgcattaat tcttgctggt caacaaaaaa catactaggg 450
 gacaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
 acccaactgc tacctatttt tctgtcccaa cgagggaagcc tgtccattga 550
 aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
 ttgaccagaa atttgccaag ccaagagtta ccccgaggaa attctctctt 650
 acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
 attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
 tttggatcct cagatcacct ggagaaacta tttaagatgg atgaagcaag 800
 tgcccgagctc cttgcttata aggaaaaagg ccattctcag agtcacaat 850
 tttctctga tcaagaaata gctcatctgc tgcctgaaaa tgtgagtgcg 900
 ctcccagcta cggtggcagt tgcttctcca cataccacct cggtactcc 950
 aaagcccgcc acccttctac ccaccaatgc ttcagtgaac cctctggga 1000
 cttccagccc acagctggcc accacagctc cacctgtaac cactgtcact 1050
 tctcagcctc ccaagaccct catttctaca gtttttacac gggtgcggc 1100
 tacactcaa gcaatggcta caacagcagt tctgaetacc accttccagg 1150
 cacctacgga ctcgaaagcc agcttagaaa ccataccgtt tacagaaatc 1200
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250
 tatgtcaaat gtggagtctt ccactatgaa taaaactgct tctggggaag 1300
 gtggggagcc cagtccagcc agttctctcc agggcagtg tccagaaaat 1350
 cagtacggcc ttccatttga aaaatggctt cttatcgggt cctgctctt 1400
 tgggtgctct ttctgtgtga taggcctcgt cctcctgggt agaactcctt 1450
 cggaatcact ccgcaggaaa cgttactcaa gactggatta ttgtatcaat 1500
 gggatctatg tggacatcta aggatggaac tcggtgtctc ttaattcatt 1550
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgcctagctt 1600
 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgctttcct 1650
 tttttttttt ggagacagag tcttgcctctg ttgccaggc ttgagtgctg 1700
 tagcacgac tcggctctca ccgcaacctc cgtctcctgt gttcaagcga 1750
 ttctctgcc tcagctcctc aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatttttga tttttagtag agacgggggt tcaccatggt 1850

ggctaggctg gtctcaaaact cctgacctag tgatccaccc tcctgggect 1900
 cccaaagtgc tgggattaca ggcatgagcc accacagctg gcccccctct 1950
 gttttatgtt tgggttttga gaaggaatga agtgggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaaaca agctctatgt 2050
 aaagtaataa agtataattg ccatataaat ttcaaaattc aactggcttt 2100
 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150
 tgggtccaga taaaatcaac tgtttatato aatttctaag ggatttgctt 2200
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 515
 Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile
 1 5 10 15
 Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu
 20 25 30
 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu
 35 40 45
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln
 50 55 60
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly
 65 70 75
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala
 80 85 90
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala
 95 100 105
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile
 110 115 120
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu
 125 130 135
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val
 140 145 150
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp
 155 160 165
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp
 170 175 180
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu
 185 190 195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser
 200 205 210
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala
 215 220 225
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala
 230 235 240
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
 245 250 255
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro
 260 265 270
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr
 275 280 285
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr
 290 295 300
 Ala Val Leu Thr Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly
 305 310 315
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu
 320 325 330
 Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn
 335 340 345
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg
 350 355 360
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn
 365 370 375
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu
 380 385 390
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly
 395 400 405
 Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu
 410 415 420
 Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile
 425 430

<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

ctcccacggt gtccagcgcc cagaatgcgg cttctgggcc tgctatgggg 50

ttgctgtgctg ctcccaggtt atgaagccct ggagggccca gaggaaatca 100

2014年12月

gagtctgcat ttgggctgtg acgtctccac ctgccccaat agatctgctc 1750
 tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800
 caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
 acagaagtgg ttgcctttnc catttgccct cctgggncca tgccttcttg 1900
 cctttggaaa aaatgatgaa gaaaacottg gctccttctc tgtctggaaa 1950
 gggttacttg cctatgggtt ctgggtgcta gagagaaaa tagaaaaacca 2000
 gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050
 ctgaaggtag ctccgagtc agcccccctg agaaggggtc ggggggtgtg 2100
 gtaaaagtag acaactacta ttttttttct ttttcoatta ttattgtttt 2150
 ttaagacaga atctcgtgct gctgcccagg ctggagtga gtggcacgat 2200
 ctgcaaaact cgctcctgg gttcaagtga ttcttctgac tcagcctccc 2250
 gagttagctg gattacaggc acgcaccacc acacctggct aatttttgta 2300
 ctttttagtag agatgggggt tcaccatgtt ggccaggctg gtcttgaact 2350
 cctgacctca aatgagctc ctgcttcagt ctcccaaatt gccgggatta 2400
 caggcatgag ccactgtgtc tggccctatt tcccttaaaa agtgaaaatta 2450
 agagtgtgtc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttctg 2550
 tttgtgtgac ttcttccac tcttttctc ttcacataat ttgcgggtgt 2600
 tctttttaca gagcaattat cttgtatata caactttgta tctgcctttt 2650
 tccaccttat cgttccatca cttattoca gcactctct gtgttttaca 2700
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 517

<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

Met Arg Leu Leu Val Leu Leu Trp Gly Cys Leu Leu Leu Pro Gly
 1 5 10 15
 Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
 20 25 30
 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Leu Arg Asp
 35 40 45
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
 50 55 60
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met
 65 70 75

Lys Gly Arg Val	Ser Ile Arg Asp Ser	Arg Gln Glu Leu Ser Leu
80	85	90
Ile Val Thr Leu Trp Asn Leu Thr Leu	Gln Asp Ala Gly Glu Tyr	
95	100	105
Trp Cys Gly Val Glu Lys Arg Gly Pro	Asp Glu Ser Leu Leu Ile	
110	115	120
Ser Leu Phe Val Phe Pro Gly Pro Cys	Cys Pro Pro Ser Pro Ser	
125	130	135
Pro Thr Phe Gln Pro Leu Ala Thr Thr	Arg Leu Gln Pro Lys Ala	
140	145	150
Lys Ala Gln Gln Thr Gln Pro Pro Gly	Leu Thr Ser Pro Gly Leu	
155	160	165
Tyr Pro Ala Ala Thr Thr Ala Lys Gln	Gly Lys Thr Gly Ala Glu	
170	175	180
Ala Pro Pro Leu Pro Gly Thr Ser Gln	Tyr Gly His Glu Arg Thr	
185	190	195
Ser Gln Tyr Thr Gly Thr Ser Pro His	Pro Ala Thr Ser Pro Pro	
200	205	210
Ala Gly Ser Ser Arg Pro Pro Met Gln	Leu Asp Ser Thr Ser Ala	
215	220	225
Glu Asp Thr Ser Pro Ala Leu Ser Ser	Gly Ser Ser Lys Pro Arg	
230	235	240
Val Ser Ile Pro Met Val Arg Ile Leu	Ala Pro Val Leu Val Leu	
245	250	255
Leu Ser Leu Leu Ser Ala Ala Gly Leu	Ile Ala Phe Cys Ser His	
260	265	270
Leu Leu Leu Trp Arg Lys Glu Ala Gln	Gln Ala Thr Glu Thr Gln	
275	280	285
Arg Asn Glu Lys Phe Trp Leu Ser Arg	Leu Thr Ala Glu Glu Lys	
290	295	300
Glu Ala Pro Ser Gln Ala Pro Glu Gly	Asp Val Ile Ser Met Pro	
305	310	315
Pro Leu His Thr Ser Glu Glu Glu Leu	Gly Phe Ser Lys Phe Val	
320	325	330

Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

ccctgcagtg cacctacagg gaag 24

<210> 519
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 519
 ctgtcttccc ctgcttggt gtgg 24

<210> 520
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 520
 ggtgcaggaa ggggtggatc ctcttctctc gctgctctgg ccacatc 47

<210> 521
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 521
 ccagtgcaca gcaggcaacg aagc 24

<210> 522
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 522
 actaggctgt atgcctgggt gggc 24

<210> 523
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 523
 gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 524
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe
 <400> 524
 aatctcagca ccagccactc agagca 26
 <210> 525
 <211> 25
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 525
 gttaaagagg gtgcccttcc agcga 25
 <210> 526
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 526
 tatcccaatg cctcccccact gctc 24
 <210> 527
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 527
 gatgaacttg gcgaaggggc ggca 24
 <210> 528
 <211> 30
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 528
 agggaggatt atccttgacc ttggaagacc 30
 <210> 529
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 529
 gaagcaagtg cccagctc 18
 <210> 530
 <211> 18
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

cggtccctg ctctttgg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 531

caccgtagct gggagcgcac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 532

agtgtaatgc aagctccc 18